

# Diversity of Leaf Fungal Endophytes from Two *Coffea arabica* Varieties and Antagonism towards Coffee Leaf Rust

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**Supplementary Table S1. Identification of fungal endophytes in Caturra and Colombia coffee varieties.** The taxonomic group was assessed for the samples isolated in this work (NCBI GenBank IDs in brackets, otherwise, determined after morphological resemblance) after blastn similarity with the GenBank ID of the closest taxa (percent identity in bold). The Days column shows the number of days before the endophyte detection in MYG Agar plates. The Ecology column describes the ecology (and geographic origin) of the closest taxid, with bibliographic references when available.

Taxonomic group	Sample ID (GenBank ID)	Closest taxa (GenBank ID: % ID)	Ecology (Origin)	Ref.	Days
<b>ASCOMYCOTA</b>					
<b>Dothideomycetes</b>					
<b>Incertae sedis</b>					
Fungal endophyte sp. 1	F112 (MK005037)	EU687041: <b>90.22</b>	Endophyte from <i>Rhipidocladum racemiflorum</i> (Panama)	1	12
<b>Capnodiales; Cladosporiaceae</b>					
Uncultured Cladosporiaceae	F129**	GQ517141: <b>86.88</b>	Endophyte from <i>Quercus macrocarpa</i> (USA)	2	4
<b>Pleosporales; Sporormiaceae</b>					
<i>Preussia pseudominima</i>	F041 (MK005019)	KU204603: <b>99.24</b>	Endophyte from <i>Daphnopsis americana</i> (Costa Rica)	3	4
<i>Preussia</i> sp.	F134 (MK005045)	KR093940: <b>95.20</b>	In fungus garden of <i>Atta sexdens rubropilosa</i> (Brazil)	4	4
<b>Eurotiomycetes</b>					
<b>Eurotiales; Aspergillaceae</b>					
<i>Penicillium cf. citrinum</i>	F096, F126 (MK005040)	KF498874 / MN788117 /	Endophyte from <i>Pogostemon cablin</i> / mould	5	3-4

		MN788106: <b>91.12</b>	associated with Cocoa (China / Nigeria)		
<b>Trichocomaceae</b>					
<i>Talaromyces cf. oumae-annae</i>	F022 (MK005060), F081, F099	OM791640 / MH934969 / MT530189: <b>89.88</b>	Endophyte from <i>Arachis hypogaea</i> / entomogenous fungi (India / Malaysia)	3-8	
<b>Sordariomycetes</b>					
Fungal endophyte sp. 2	F065 (MK005023)	KT289540: <b>96.19</b>	Endolichenic fungus (Costa Rica)	6	6
<b>Diaporthales; Diaporthaceae</b>					
<i>Diaporthe australafricana</i>	F118 (MK005038)	MF280391 / OM975589: <b>95.34</b>	Phytopathogen (Chile) / Endophyte (USA)	6	
<b>Glomerellales; Glomerellaceae</b>					
<i>Colletotrichum acutatum</i> complex					
<i>C. aenigma</i>	F026, F132 (MK005044)	ON329227: <b>97.95</b>	Anthracnose (Asia)	7	6
<i>C. cf. fioriniae</i>	F113 (MK005058)	ON368204: <b>89.00</b>	Bitter Rot Disease (USA)	8	4
<i>C. lupini</i>	F072 (MK005027), F073, F075, F082	MH178095: <b>99.14</b>	Isolated from <i>Lupinus micranthus</i> Guss (China)	4-6	
<i>C. scovillei</i>	F043 (MK017761), F045, F057	LC488868: <b>99.15</b>	Anthracnose (Viet Nam)	4	
<i>Colletotrichum</i> sp. 1	F042 (MK005049), F058	MK005027 (F072): 91.53 MK005048 (F040) / MH865411 / MH854629: <b>91.45</b>	(Colombia)	9	4
<i>Colletotrichum</i> sp. 2	F036, F039, F040 (MK005048), F046, F102	EF687919: <b>92.65</b>	Endophyte from <i>Coffea arabica</i> Colombia (Colombia)	10	4
<i>Colletotrichum</i> sp. 3	F127 (MK005055)	JQ894656: <b>91.74</b>	Isolated from <i>Mangifera indica</i> (India)	4	
<i>C. boninense</i> species complex					
<i>C. boninense</i> / <i>C. cymbidicola</i>	F066 (MK005051), F080 (MK005052)	MK005052 (F080): 97.70 / MN458530: <b>97.30</b> / MT464454: 97.32	Endophyte from <i>Justicia brandegeana</i> (Brazil)	12	4
<i>Colletotrichum</i> sp. 4	F011* (MK005046), F078, F084, F133	OL842171: <b>90.40</b>	Endophyte of aquatic plants, China	11	3-4
<i>C. gloeosporioides</i> species complex					

	<i>C. karstii</i>	F059 (MK005022), F083 (MK005031), F085 (MK005032), F050 (MK005020), F079 (MK005030), F077 (MK005029), F095 (MK005035), F031, F068, F089, F098, F100	OM436864: 96.95 / MN842791: 97.66 / OP445269: 98.14 / KX578788: <b>98.80</b> / KX578788: 98.80 / OM436864: 98.51 / OP782678: 93.77 / KX578788 / MK005029: 93.52	Endophyte / <i>Citrus limon</i> (South Africa)	13	4-7
	<i>C. musae</i>	F007* (MK005009), F029	OW988162: <b>94.84</b> / KX069828: 94.66	Anthracnose <i>Musa</i> <i>acuminata</i> (Australia)		4-5
	<i>Colletotrichum</i> sp. 5	F053 (MK005050), F094	MK005055 (F127): <b>91.21</b> / OK030873: 89.36	Crown rot on strawberries (USA)		4-5
Glomerellales; Plectosphaerellaceae						
	<i>Musicillium theobromae</i>	F017*, F019* (MK005015), F103	MK579179: <b>95.84</b>	Isolated from <i>Solanum</i> <i>betaceum</i> root (New Zeland)		5-10
Hypocreales; Clavicipitaceae						
	<i>Beauveria</i> sp.	F117				7
Sordariales						
	Fungal endophyte sp. 3	F104**	KF435260: <b>86.97</b>	Endophyte (Panama)	14	10
Sordariales; Chaetomiaceae						
	<i>Chaetomium</i> sp.	F060, F074 (MK005028)	MF495440 / KF435950 / KF435726 / KF435552 / KF435385: <b>87.70</b>	Endophyte (Panama)	14	4-6
Trichosphaeriales; Trichosphaeriaceae						
	<i>Nigrospora cf. oryzae</i>	F025 (MK005047), F030, F034**	MT123068: <b>91.94</b>	Endophyte (China)		5-10
	<i>Nigrospora</i> sp. 1	F128 (MK005041)	MN341467: <b>89.74</b>	Endolichenic from <i>Peltigera neopolydactyla</i> (South Korea)	15	7
Xylariales; Hypoxylaceae						
	<i>Annulohypoxyton</i> cf. <i>stygium</i>	F015 (MK005013)	KP133169: 98.75	Endophyte from <i>Miconia</i> <i>floribunda</i> (Ecuador)	16	6
	<i>Hypoxyton</i> sp. 1	F071 (MK005026)	FJ612775: <b>96.97</b>	Endophyte from <i>Cecropia</i> <i>insignis</i> seeds (Panama)	17	11
Xylariales; Xylariaceaea						

Fungal endophyte sp. 4	F106 (MK005036)	EU687119: <b>97.13</b>	Endophyte (Panama)	1	4
Fungal endophyte sp. 5	F064**	KU747690 / FJ612923: <b>75.39</b>	Endophyte (Panama)	17, 19	4
<i>Anthostomella</i> sp.	F121 (MK005059)	JQ754021: <b>91.14</b>	Endophyte (Brazil)	20	6
<i>Lopadostoma polynesium</i>	F001*, F002* (MK005007)	KC774600: <b>91.11</b>	Isolated from bark of <i>Amelanchier ovalis</i>	21	7
<i>Nemania difusa</i>	F125 (MK005039)	KF435731: <b>97.88</b> ; MF770851: 97.38	Endophyte from <i>Myconia</i> sp. leaves (Panama)	1	4
<i>Xylaria adscendens</i>	F086 (MK005033), F035 (MK005017), F032 (MK005016), F087 (MK005034), F097 (MK005054), F131 (MK005043), F047, F048, F055 F088 (MK005053), F012*, F051, F054, F124	KP133288: <b>96.92</b> , 95.79, 95.07, 95.60, 93.68, and 95.18	Endophyte from <i>Myconia</i> <i>brevitheca</i> (Ecuador)	16	4-5
<i>Xylaria cf berteroi</i>	F070 (MK005025)	MK334005 / MK247857: <b>98.75</b>	Disease of <i>Actinidia</i> <i>chinensis</i> cv. Hongyang (China)		3-5
<i>Xylaria curta</i>	F009* (MK005011), F052 F008*	KJ883611: <b>97.21</b> MN833802 / KT289626 / KP133438: <b>94.22</b>	Endophyte from <i>Coffea</i> <i>arabica</i> L. (Puerto Rico)		4
<i>Xylaria multiplex</i>	(MK005010), F021 F016* (MK005014), F114 F067 (MK005024), F037 (MK005018), F010*, F063	KF467102: <b>94.59</b> MH003490: <b>96.34</b> KF435704: <b>98.54</b> , / MK005018 (F037) 97.24	Endophyte from <i>Herrania</i> <i>nycterodendron</i> (Ecuador)		5-10
<i>Xylaria</i> sp. 1					
<i>Xylaria</i> sp. 2			Endophyte from <i>Polylepis</i> <i>incana</i> (Ecuador)		6-12
<i>Xylaria</i> sp. 3			Endophyte from <i>Myconia</i> <i>chrysophylla</i> (Panama)	14	4-6
<i>Xylaria</i> sp. 4			Endophyte from <i>Polylepis</i> <i>lanuginosa</i> (Ecuador)		10
<i>Xylaria</i> sp. 5			Endophyte from <i>Otoba</i> <i>gracilipes</i> (Colombia)		4
<i>Xylaria</i> sp. 6			Endophyte from <i>Diospyros</i> <i>crassiflora</i> (Cameroon)		4-6

# **BASIDIOMYCOTA**

Agaricomycetes				
Hymenochaetales;				
Schizoporaceae				
<i>Xylodon</i> sp.	F107**	OM891735: 87.3	wood-rotting fungi (China)	5
<b>44 taxonomic groups</b>				

\* Denotes samples that were identified in the pre-experiment, and were not included in the analyses.

\*\* Denotes sequences of low quality.

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