

Table S1. Bioactive compounds identified from extracts of endophytic fungi isolated in this study, along with their biological activities reported in the literature and some reports of the compound in other references.

Compound name	Molecular formula	Endophytic fungi (present research)						Reported biological activities in the literature	Reports of the compound in other references		
		<i>Acremonium</i> sp.	<i>Epicoccum nigrum</i>	<i>Fusarium equiseti</i>	<i>Fusarium</i> sp.	<i>Lecanicillium aphanocladii</i>	Fungus name		Source of the fungus	Author(s)	
2,4-Di-tert-butylphenol	C ₁₄ H ₂₂ O	+	+	-	+	-	Antioxidant, Antimicrobial, Antibiotics, Antibiofilm, Insecticidal and Nematicidal, Antivirulence, Anti-inflammatory (Zhao et al. 2020)	<i>Aspergillus terreus</i>	-	Zhao et al. 2020	
								<i>Didymium iridis</i>	-	Zhao et al. 2020	
								<i>Gliomastix murorum</i>	-	Zhao et al. 2020	
								<i>Trametes suavelens</i>	-	Zhao et al. 2020	
								<i>Penicillium</i> spp.	-	Zhao et al. 2020	
2,5-Dioxomorpholine	C ₁₂ H ₂₁ NO ₃	-	-	-	+	-	Anticancer, Antiinsectan, Antimicrobial (Robey et al. 2018)	<i>Aspergillus aculeatus</i>	-	Robey et al. 2018	
Hexadecane	C ₁₆ H ₃₄	+	+	+	+	+	Antibacterial, Antioxidant (Kumari et al. 2019)	<i>Trichoderma longibrachiatum</i>	<i>Dendrobium nobile</i>	Sarsaiya et al. 2020	
Adipic acid	C ₆ H ₁₀ O ₄	-	-	-	+	-	Antibacterial (Das et al. 2020)	<i>Bipolaris specifera</i>	<i>Zingiber nimmonii</i>	Das et al. 2020	
Di-epi-alpha-cedrene (1H-3a,7-Methanoazulene)	C ₁₅ H ₂₄	-	-	-	+	-	Antifungal (Mioso et al. 2014)	<i>Penicillium roqueforti</i>	Marine-derived fungus	Mioso et al. 2014	
Zaragozic acid	C ₃₅ H ₄₆ O ₁₄	-	-	-	+	-	Antiviral, Anticancer, Antibacterial (Khiralla et al. 2020)	<i>Curvularia papendorffii</i>	<i>Vernonia amygdalina</i>	Khiralla et al. 2020	

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Di-n-decylsulfone	C ₂₀ H ₄₂ O ₂ S	-	-	-	+	-	Antimicrobial, Antihelminthic, Antioxidant, Antifungal (El-Zawawy et al. 2020)	<i>F. oxysporum</i>	<i>Urospermum picroides</i>	El-Zawawy et al. 2020	
Pentadecane	C ₁₅ H ₃₂	-	-	-	+	-	Antimicrobial, Anti-inflammatory (Mishra et al. 2017)	<i>Trichoderma longibrachiatum</i>	<i>Dendrobium nobile</i>	Sarsaiya et al. 2020	
								<i>Aspergillus clavatonanicus</i>	<i>Mirabilis jalapa</i>	Mishra et al. 2017	
Eicosane	C ₂₀ H ₄₂	+	-	+	+	+	Antimicrobial, Anti-inflammatory, Antipyretic, Analgesic (Sarsaiya et al. 2020)	<i>Trichoderma longibrachiatum</i>	<i>Dendrobium nobile</i>	Sarsaiya et al. 2020	
Docosane	C ₂₂ H ₄₆	+	+	+	+	+	Antibacterial, Antifungal (Li et al. 2021)	<i>Alternaria alternata</i>	<i>Ampelopsis grossedentata</i>	Li et al. 2021	
								<i>Gliomastix murorum</i>	<i>Paris polyphylla</i> var. <i>yunnanensis</i>	Zhao et al. 2009	
								<i>Pichia guilliermondii</i>	<i>Paris polyphylla</i> var. <i>yunnanensis</i>	Zhao et al. 2009	
Isopropyl myristate	C ₁₇ H ₃₄ O ₂	-	-	-	+	-	Anticancer, Antibacterial, Antifungal (Mo & Lim 2005)	<i>Aureobasidium pullulans</i>	<i>Solanum mauritianum</i>	Pelo et al. 2021	
								<i>Cladosporium</i> sp.	<i>Solanum mauritianum</i>	Pelo et al. 2021	
								<i>Hyalodendriella</i> sp.	<i>Solanum mauritianum</i>	Pelo et al. 2021	
								<i>Phialophora</i> sp.	<i>Solanum mauritianum</i>	Pelo et al. 2021	
								<i>Penicillium chrysogenum</i>	<i>Solanum mauritianum</i>	Pelo et al. 2021	

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									<i>Fusarium</i> sp.	<i>Solanum mauritianum</i>	Pelo et al. 2021
Propanediol	C ₃ H ₈ O ₂	-	-	-	+	-	Antimicrobial (Bhatnagar et al. 2019)	<i>Piriformospora indica</i>	<i>Parachlorella kessleri</i>	Bhatnagar et al. 2019	
Nonadecane	C ₁₉ H ₄₀	-	-	+	+	-	Antimicrobial, Biofuel (Ahamed & Ahring 2011)	<i>Acremonium</i> sp.	<i>Mentha piperita</i>	Chowdhary & Kaushik 2018	
								<i>Gliocladium roseum</i>	Unknown plant	Ahamed & Ahring 2011	
Lauric acid	C ₁₂ H ₂₄ O ₂	-	-	+	+	-	Antimicrobial (Tanapichatsakul et al. 2019)	<i>Diaporthe</i> sp.	<i>Cinnamomum Loureiro</i>	Tanapichatsakul et al. 2019	
								<i>Neopestalotiopsis</i> sp.	<i>Cinnamomum Loureiro</i>	Tanapichatsakul et al. 2019	
Bromotetradecane	C ₁₄ H ₂₉ Br	-	-	-	+	-	Anticancer, Antibacterial (Sawant et al. 2018)	<i>Setosphaeria monoceras</i>	<i>Rhizophora apiculata</i>	Sawant et al. 2018	
Hexadecanoic acid	C ₁₆ H ₃₂ O ₂	+	+	+	+	+	Antifungal, Antioxidants, Hypocholesterolemic prevention, Anticancer (Anisha & Radhakrishnan 2017)	<i>Aspergillus sydowii</i>	<i>Ricinus communis</i>	Kanjana et al. 2019	
								<i>Aspergillus flavus</i>	<i>Psidium guajava</i>	Kanjana et al. 2019	
								<i>Fusarium</i> sp.	<i>Zingiber officinale</i>	Anisha & Radhakrishnan 2017	
Benzenepropanoic acid, methyl ester	C ₁₀ H ₁₂ O	-	-	-	+	-	Antimicrobial, Anti-inflammatory (Khiralla et al. 2020)	<i>Curvularia papendorfii</i>	<i>Vernonia amygdalina</i>	Khiralla et al. 2020	
Undecane	C ₁₁ H ₂₄	-	-	+	+	-	Antimicrobial (Zhang et al. 2011)	<i>Chaetomium globosum</i>	<i>Passiflora foetida</i>	Kanjana et al. 2019	
								<i>Fusarium tricinctum</i>	<i>Paris polyphylla</i> var. <i>yunnanensis</i>	Zhang et al. 2011	

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Dotriacontane	C ₃₂ H ₆₆	+	-	-	+	-	Antioxidant, Antispasmodic, Anti-inflammatory, Cytotoxic activity, Antiviral (Asong et al. 2019)	<i>Penicillium oxalicum</i>	<i>Kalanchoe tomentosa</i>	Hegazy et al. 2015	
Tetratetracontane	C ₄₄ H ₉₀	-	-	-	+	-	Anti-candidal, Antioxidant (Pelo et al. 2021)	<i>Aureobasidium pullulans</i>	<i>Solanum mauritianum</i>	Pelo et al. 2021	
								<i>Cladosporium</i> sp.	<i>Solanum mauritianum</i>	Pelo et al. 2021	
								<i>Fusarium</i> sp.	<i>Solanum mauritianum</i>	Pelo et al. 2021	
Tetradecyl ester	C ₄₆ H ₆₂ N ₂ O ₅	-	-	-	+	-	Antimicrobial (Abdel-Motaal et al. 2022)	<i>Aspergillus terreus</i>	<i>Solenostemma arghel</i>	Abdel-Motaal et al. 2022	
Hentriacontane	C ₃₁ H ₆₄	-	-	+	+	-	Anti-inflammatory, Antitumor, Antimicrobial (Albratty et al. 2021)	<i>Pleurotus ostreatus</i>	In compost of <i>Mansonia altissima</i> , <i>Nauclea didderichii</i> and sawdust	Adongbede 2022	
Heptadecane	C ₁₇ H ₃₆	-	+	+	+	-	Anticancer, Anti-inflammatory, Antioxidant (Jayaram et al. 2021)	<i>Cladosporium cladosporioides</i>	<i>Cymbopogon martinii</i>	Jayaram et al. 2021	
								<i>Cladosporium tenuissi</i>	<i>Cymbopogon martinii</i>	Jayaram et al. 2021	
Heneicosane	C ₂₁ H ₄₄	+	-	+	+	-	Antibacterial (Li et al. 2021)	<i>Alternaria alternata</i>	<i>Ampelopsis grossedentata</i>	Li et al. 2021	
Tritriacontane	C ₃₃ H ₆₈	-	-	-	+	-	Fumigants, Antimicrobial (Meshram et al. 2017)	<i>Muscodor indica</i>	<i>Cinnamomum camphora</i>	Saxena & Strobel 2021	
Diisooctyl phthalate	C ₂₄ H ₃₈ O ₄	+	+	+	+	+	Antimicrobial, Anti-diabetic (Huang et al. 2021)	<i>Aspergillus terreus</i>	<i>Solenostemma argel</i>	Abdel-Motaal et al. 2022	

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								<i>Penicillium verrucosum</i>	<i>Solenostemma argel</i>	Abdel-Motaal et al. 2022
								<i>Fusarium solani</i>	<i>Solenostemma argel</i>	Abdel-Motaal et al. 2022
								<i>Penicillium</i> sp.	<i>Tabebuia argentea</i>	Kalavathi et al. 2017
Methyl stearate	C ₁₉ H ₃₈ O ₂	-	+	+	+	+	Antimicrobial, Antifungal, Antioxidant (Pinto et al. 2017)	<i>Curvularia papendorfii</i>	<i>Vernonia amygdalina</i>	Khiralla et al. 2020
Octadecane	C ₁₈ H ₃₈	+	+	+	+	+	Antimicrobial (Sarsaiya et al. 2020)	<i>Trichoderma longibrachiatum</i>	<i>Dendrobium nobile</i>	Sarsaiya et al. 2020
1-Hexanol, 2-ethyl	C ₈ H ₁₈ O	-	+	-	-	-	Antimicrobial (Sridharan et al. 2021)	<i>Trichoderma longibrachiatum</i>	Soil fungus	Sridharan et al. 2021
(2'R) -2- (2'-hydroxypropyl) -4 -methoxyl -1, 3-benzenediol	C ₁₀ H ₁₄ O ₄	-	+	-	-	-	Antimicrobial (Luo et al. 2019)	<i>Colletotrichum gloeosporioides</i>	<i>Ceriops tagal</i>	Luo et al. 2019
Tridecane	C ₁₃ H ₂₈	-	+	-	-	-	Antimicrobial, Antioxidant (Siddiquee et al. 2012)	<i>Cladosporium cladosporioides</i>	<i>Cymbopogon martini</i>	Jayaram et al. 2021
								<i>Cladosporium tenuissimum</i>	<i>Cymbopogon martini</i>	Jayaram et al. 2021
								<i>Trichoderma harzianum</i>	Biocontrol fungus	Siddiquee et al. 2012
Dodecane	C ₁₂ H ₂₆	-	+	-	-	-	Antimicrobial, Biofuel (Ahamed & Ahring 2011)	<i>Trichoderma longibrachiatum</i>	<i>Dendrobium nobile</i>	Sarsaiya et al. 2020
								<i>Gliocladium</i> sp.	unknown plant	Ahamed & Ahring 2011

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Tetradecane	C ₁₄ H ₃₀	-	+	-	-	-	Antibacterial, Antifungal (Bhimba et al. 2011)	<i>Irpex hynoides</i>	<i>Rhizophora mucronata</i>	Bhimba et al. 2011
Heneicosene	C ₂₁ H ₄₂	-	+	-	-	-	Antimicrobial (Kaur et al. 2020)	<i>Chaetomium globosum</i>	<i>Moringa oleifera</i>	Kaur et al. 2020
Pentacosane	C ₂₅ H ₅₂	-	+	-	-	-	Antimicrobial, Antioxidant (Marrufo et al. 2013)	<i>Aspergillus</i> sp.	<i>Salvadora oleoides</i>	Dhankhar & Yadav 2013
Di-2-ethylhexylphthalate	C ₂₄ H ₃₈ O ₄	-	+	-	-	-	Antimicrobial, Insecticidal (Huang et al. 2021)	<i>Aspergillus awamori</i>	Marine-derived fungus	Huang et al. 2021
derivate of Cyclonerolidol	-	+	-	-	-	-	Antimicrobial (Zhang et al. 2017)	<i>Trichoderma</i> sp.	Mangrove tree	Zhang et al. 2017
2-Coumaranone	C ₈ H ₆ O ₂	-	-	+	-	-	Anti-allergic, Nematicidal, Antioxidant, Anti-inflammatory, Anti-HIV-1 (Sun et al. 2022)	<i>Aspergillus terreus</i>	<i>Solenostemma argel</i>	Abdel-Motaal et al. 2022
								<i>Penicillium citrinum</i>	<i>Annona muricata</i>	Kouipou Toghueo et al. 2019
								<i>Neocosmospora rubicola</i>	<i>Annona muricata</i>	Kouipou Toghueo et al. 2019
Heptacosane	C ₂₇ H ₅₆	-	-	+	+	-	Antibacterial, Antioxidant (Marrufo et al. 2013)	<i>Aspergillus terreus</i>	<i>Solenostemma argel</i>	Abdel-Motaal et al. 2022
								<i>Alternaria alternata</i>	<i>Ampelopsis grossedentata</i>	Li et al. 2021
Hexacosane	C ₂₆ H ₅₄	-	-	+	+	-	Antimicrobial, Antioxidant (Marrufo et al. 2013)	<i>Cladosporium</i> sp.	<i>Solanum mauritianum</i>	Pelo et al. 2021
								<i>Fusarium</i> sp.	<i>Solanum mauritianum</i>	Pelo et al. 2021
Tetracosan	C ₂₄ H ₅₀	-	-	+	+	-	Antioxidant, Antitumor, Antifungal (Zhao et al. 2009;	<i>Cladosporium cladosporioides</i>	<i>Cymbopogon martinii</i>	Jayaram et al. 2021

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							Jayaram et al. 2021)	<i>Cladosporium tenuissi</i>	<i>Cymbopogon martinii</i>	Jayaram et al. 2021
								<i>Gliomastix murorum</i>	<i>Paris polyphylla</i> var. <i>yunnanensis</i>	Zhao et al. 2009
Trichoacorenol	C ₁₅ H ₂₆ O	+	-	-	-	-	Anti-inflammatory, Antimicrobial, Antimicroalgal (Zhang et al. 2017)	<i>Trichoderma</i> sp.	Mangrove tree	Zhang et al. 2017
								<i>Trichoderma</i> sp.	<i>Paeonia delavayi</i>	Wu et al. 2011
								<i>Trichoderma harzianum</i>	<i>Laminaria japonica</i>	Wu et al. 2011
1-Docosanol	C ₂₂ H ₄₆ O	+	-	-	-	-	Antiviral, Insecticidally (El-Sayed et al. 2020)	<i>Aspergillus</i> sp.	<i>Solenostemma arghel</i>	Jayaram et al. 2021
								<i>Fusarium solani</i>	<i>Solenostemma arghel</i>	Jayaram et al. 2021
Pentatriacontane	C ₃₅ H ₇₂	+	-	-	-	-	Antimicrobial (Meshram et al. 2017)	<i>Muscodor camphora</i>	<i>Cinnamomum camphora</i>	Meshram et al. 2017
Octadecene	C ₁₈ H ₃₆	+	-	-	-	-	Anticancer, Antioxidant, Antimicrobial (Thelma & Balasubramanian 2021)	<i>Curvularia papendorfii</i>	<i>Vernonia amygdalina</i>	Khiralla et al. 2020
N-ethyl-1,3-dithioisindoline	C ₁₀ H ₁₃ NS ₂	-	+	-	-	-	Antiviral, Anti-inflammatory, Nootropic, Antiarrhythmic, Analgesic (Raimundo et al. 2021)	unidentified endophytic fungus	<i>Avicennia marina</i>	El Amrani et al. 2012
Heptadecanoic acid	C ₁₇ H ₃₄ O ₂	+	-	-	-	-	Antimicrobial, Anticancer (Kandasamy et al. 2012)	<i>Trichoderma</i> sp.	Soil fungus	Kandasamy et al. 2012

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14-Beta-H-Pregna	C ₂₁ H ₃₆	-	+	-	-	-	Antimicrobial, Antioxidant (Gharari et al. 2019)	-	-	-
Cyclohexane,1,1'-(2-methyl-1,3-propanediyl) bis	C ₁₆ H ₃₀	-	-	+	-	-	Antioxidant (Delaram et al. 2019)	-	-	-