

Table S4. Terpenes from endophytic fungi and their biological activities, metabolite class, fungus, host plant(s), reference.

Metabolite Class	Fungus	Host Plant(s)	Compounds Isolated	Biological Target	Biological Activity	Reference	
Sesquiterpenoids	<i>Aspergillus</i> 085242	sp.	Asperterpenol A (362)	AChE inhibitory activity	IC ₅₀ : 2.3 and 3.0 μM, respectively	83	
			Asperterpenol B (363)				
	<i>Alternaria alternata</i>	<i>Psidium littorale</i> Raddi	(1R,5R,6R,7R,10S)-1,6-Dihroxyeu desm-4(15)-ene (364)	Neuroprotection against glutamate induced-PC12 cells injury	Inactive at 40 μM and 80 μM	29	
	<i>Paecilomyces</i> TE-540	sp.	<i>Nicotiana tabacum</i> L	Paecilacadinol A (365)	AChE inhibitory activity	Inhibition rates: 27.05%, 34.23%, 27.29%, and 42.35% at 40 μM, respectively	84
				Paecilacadinol B (366)			
				Ustusol D (367)			
				Ustusol E (368)			
				12-Hydroxyalbrassitriol (369)		IC ₅₀ : 43.02 ± 6.01 and 35.97 ± 2.12 μM, respectively	
				2-Hydroxyalbrassitriol (370)			
				Deoxyuvidin B (371)		Inhibition rates: 19.23%, 33.04%, 17.56%, and 24.24% at 40 μM, respectively	
				3β,9α,11-Trihydroxy-6-oxodrim-7-ene (372)			
				2α,11-Dihydroxy-6-ox-odrim-7-ene (373)			
				Ustusol B (374)			
<i>Pseudofusicoccum</i> sp. J003	<i>Sonneratia apetala</i> Buch.-Ham	Acorenone C (375)	AChE inhibitory activity	Inhibition rate of 23.34% at 50 μM	85		
<i>Nemania bipapillata</i>	<i>Asparagopsis taxiformis</i> -	(+)-(2R,4S,5R,8S)-(376)	AChE and BChE	Inhibition rates of 19.9%	86		

(AT-05)	<i>Falkenbergia</i>	(+)-(2 <i>R</i> ,4 <i>R</i> ,5 <i>R</i> ,8 <i>S</i>)-4-Deacetyl-5-hydroxy-botryenalol (377)	inhibitory activity	and 14.1% for 376 , 18.3% and 6.7% for 377 , 21.1% and 5.5% for 378 , 27.7% and 7.3% for 379 , 22.8% and 5.1% for 380 , 19.6% and 3.2% for 381 , respectively	
		(+)-(2 <i>R</i> ,4 <i>S</i> ,5 <i>R</i> ,8 <i>R</i>)-4-Deacetyl-botryenalol (378)			
		(+)-(2 <i>R</i> ,4 <i>R</i> ,8 <i>R</i>)-(379)			
		(+)-(2 <i>R</i> ,4 <i>S</i> ,8 <i>S</i>)-(380)			
		4 β -Acetoxy-9 β ,10 β ,15 α -trihydroxyprobotrydial (381)			
<i>Xylaria</i> sp. HNWSW-2		Guaidiol (382)	AChE inhibitory activity	Inhibition rate of 12.9% at 50 μ g/mL	46
<i>Nigrospora oryzae</i>	<i>Irpex lacteus</i>	Nigrosirpexin A (383)	AChE inhibitory activity	Inhibition rate of 35% at 50 μ M	87
<i>Colletotrichum gloeosporioides</i> GT-7	<i>Uncaria rhynchophylla</i>	Colletotrichine A (384)	AChE inhibitory activity	IC ₅₀ , 28 μ g/mL	88
co-culture of the <i>Armillaria</i> sp. and <i>Epicoccum</i> sp. YUD17002		Epicoterpene A (385)			
		Epicoterpene B (386)			
		Epicoterpene C (387)	AChE inhibitory activity	Inactive at 50 μ M	47
		Epicoterpene D (388)			
		Epicoterpene E (389)			
<i>Phomopsis</i> sp. TJ507A	<i>Phyllanthus glaucus</i>	Phomophyllin A (390)			
		Phomophyllin B (391)			
		Phomophyllin C (392)	BACE1 inhibitory activity	Inhibition rates of 43%, 35%, 20%, 40%, 35%, 40%, and 20% at 40 μ M, respectively	89
		Phomophyllin D (393)			
		Phomophyllin E (394)			
		Phomophyllin F (395)			

				Phomophyllin G (396)			
				Phomophyllin H (397)		Inactive	
				Phomophyllin I (398)		Inhibition rate about 40% at 40 μ M.	
				Phomophyllin J (399)		Inactive	
				Phomophyllin K (400)			
				Phomophyllin L (401)		Inhibition rates about 3%, 5%, 5%, 40%, 2%, 2%, and 43% at 40 μ M, respectively	
				Phomophyllin M (402)			
				Phomophyllin N (403)			
				Granulone B (404)			
				Radulone B (405)			
				2-(2,2,4,6-Tetramethylindan-5-yl)ethanol (406)			
				Pterodin Z (407)			
				Onitin (408)		Inactive	
				Dehydrobotrydienol (409)			
				7-Hydroxy-10-oxodehydrodihydrobotrydial (410)		Inhibition rate about 42% at 40 μ M.	
Meroterpenoids	<i>Colletotrichum gloeosporioides</i> GT-7	<i>U. rhynchophylla</i>		Colletotrichine B (411)	AChE inhibitory activity	IC ₅₀ , 38.0 μ g/mL	90
	<i>Colletotrichum</i> sp. SCSIO KcB3-2	<i>Kandelia candel</i>		Bisabolanoic acid A (412)	AChE inhibitory activity	IC ₅₀ , 2.2 μ M	91
	<i>Penicillium</i> sp. sk5GW1L	<i>Kandelia candel</i>		Arigsugacin I (413)	AChE inhibitory activity	IC ₅₀ : 0.64, 0.37, 7.03, 38.23, 53.39, 3.03, 0.23, and 0.028 μ M, respectively	92, 93
				Arigsugacin F (414)			
				Territrem B (415)			

			3-Epiarigsugacin E (416)			
			Arisugacin D (417)			
			Arisugacin B (418)			
			Territrem C (419)			
			Terreulactone C (420)			
<i>Aspergillus terreus</i> Thom	<i>Tripterygium wilfordii</i> Hook. f. (Celastraceae)	BACE1 and AChE inhibitory activities	Spiroterreusnoid A (421)	94	IC ₅₀ : 5.86 and 22.18 μM for 421, 25.55 and 27.36 μM for 422, 21.24 and 23.87 μM for 423, 24.98 and 26.85 μM for 424, 27.16 and 32.51 μM for 425, 25.36 and 31.33 μM for 426, respectively	
			Spiroterreusnoid B (422)			
			Spiroterreusnoid C (423)			
			Spiroterreusnoid D (424)			
			Spiroterreusnoid E (425)			
			Spiroterreusnoid F (426)			
<i>Aspergillus</i> 16-5c	<i>Sonneratia apetala</i>	AChE inhibitory activity	2-Hydro-acetoxydehydroaustin (427)	95	IC ₅₀ > 50 μM	
			11-Acetoxyisoaustinone (428)			
			Isoaustinol (429)			
			Austin (430)			
			Austinol (431)			
			Acetoxydehydroaustin (432)			
			Dehydroaustin (433)			
			Dehydroaustinol (434)			
			Preaustinoid A2 (435)			
		1,2-Dihydro-acetoxydehydroaustin B (436)	IC ₅₀ > 50 μM			
Diterpenoids	<i>Penicillium chrysogenum</i> MT-12	<i>Huperzia serrata</i>	Penicichrysogene A (437)	AChE and BChE inhibitory activities	Inactive at 100 μM	96

Penicichryso-gene B (438)					
<i>Aspergillus</i> sp. YXf3	<i>Ginkgo biloba</i>	Aspergiloid I (439)	Anti-oxidant and AChE inhibitory activities	Inactive at 50 µg/mL	97

IC₅₀, half maximal effective concentration; AChE, acethylcholinesterase; BChE, Butyrylcholinesterase.