

Table S4 The spearman correlation analysis of the relative abundance of *Tricholoma* with bacteria genera in the habitat soil

Bacteria genus in soil	Spearman correlation coefficient (r)	Significance (p)
<i>Terracidiphilus</i>	0.875	0.000
<i>Plot4-2H12</i>	0.872	0.000
<i>Burkholderia-Caballeronia-Paraburkholderia</i>	0.866	0.000
<i>Candidatus_Koribacter</i>	0.854	0.000
<i>Acidiphilium</i>	0.849	0.000
<i>Mucilaginibacter</i>	0.843	0.000
<i>Jatrophihabitans</i>	0.826	0.000
<i>Edaphobacter</i>	0.816	0.000
<i>GAS113</i>	0.8	0.000
<i>1174-901-12</i>	0.796	0.000
<i>Cupriavidus</i>	0.794	0.000
<i>Heliimonas</i>	0.768	0.000
<i>Inquilinus</i>	0.746	0.000
<i>Acidocella</i>	0.733	0.001
<i>Sporichthya</i>	0.724	0.001
<i>Coxiella</i>	0.723	0.001
<i>Gemmatirosa</i>	0.718	0.001
<i>Rhodanobacter</i>	0.708	0.001
<i>Actinoplanes</i>	0.704	0.001
<i>Crossiella</i>	0.687	0.002
<i>Kutzneria</i>	0.681	0.002
<i>Acidotherrmus</i>	0.68	0.002
<i>Acidicapsa</i>	0.679	0.002

<i>Legionella</i>	0.679	0.002
<i>Bradyrhizobium</i>	0.676	0.002
<i>Candidatus_Berkiella</i>	0.672	0.002
<i>Labrys</i>	0.67	0.002
<i>Ktedonobacter</i>	0.667	0.002
<i>Roseiarcus</i>	0.662	0.003
<i>bacterium_Ellin6515</i>	0.652	0.003
<i>Pedosphaera</i>	0.65	0.004
<i>bacterium_Ellin516</i>	0.65	0.003
<i>Nevskia</i>	0.648	0.004
<i>Candidatus_Solibacter</i>	0.645	0.004
<i>Acidipila</i>	0.63	0.005
<i>Aquicella</i>	0.628	0.005
<i>Granulicella</i>	0.626	0.005
<i>bacterium_enrichmentculturecloneauto67_4W</i>	0.622	0.006
<i>bacterium_enrichmentculturecloneheteroA49_4W</i>	0.616	0.006
<i>Occallatibacter</i>	0.614	0.007
<i>Mycobacterium</i>	0.603	0.008
<i>Actinospica</i>	0.603	0.008
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<i>Phyllobacterium</i>	-0.835	0
<i>Pseudoxanthomonas</i>	-0.791	0
<i>Streptococcus</i>	-0.761	0
<i>Nitrospira</i>	-0.749	0
<i>Thermomonas</i>	-0.717	0.001
<i>Luteimonas</i>	-0.655	0.003
<i>Sphingobium</i>	-0.638	0.004

<i>MNDI</i>	-0.633	0.005
<i>Bosea</i>	-0.632	0.005
<i>Taibaiella</i>	-0.618	0.006
<i>Agromyces</i>	-0.611	0.007
