

**S6 Table.** Reclassification of genomes that are currently unclassified *Nocardia* species.

Phylogroup	NCBI species	closest related type strain	ANI value (%)	is DDH (%)	Species
<i>N. farcinica</i> group	<i>Nocardia</i> sp. FDAARGOS_372	<i>N. farcinica</i> DSM43665 <sup>T</sup>	99.15	92.4	<i>N. farcinica</i>
<i>N. farcinica</i> group	<i>Nocardia</i> sp. SYSU K10002	<i>N. takedensis</i> DSM44801 <sup>T</sup>	80.25	23.3	putative new species 1
<i>N. farcinica</i> group	<i>Nocardia</i> sp. W9405	<i>N. arizonensis</i> DSM45748 <sup>T</sup>	99.96	99.8	<i>N. arizonensis</i>
<i>N. farcinica</i> group	<i>Nocardia</i> sp. CNY236	<i>N. amamiensis</i> DSM45066 <sup>T</sup>	80.48	24.2	putative new species 2
<i>N. farcinica</i> group	<i>Nocardia</i> sp. CICC 11023	<i>N. tenerifensis</i> DSM44704 <sup>T</sup>	86.45	31.8	putative new species 3
<i>N. farcinica</i> group	<i>Nocardia</i> sp. CS682	<i>N. ninae</i> DSM44978 <sup>T</sup>	99.96	63.3	<i>N. ninae</i>
<i>N. asteroides</i> group	<i>Nocardia</i> sp. Root136	<i>N. salmonicida</i> DSM40472 <sup>T</sup>	97.66	79.5	<i>N. salmonicida</i>
<i>N. transvalensis</i> group	<i>Nocardia</i> sp. BMG111209	<i>N. stercoris</i> NEAU LL90 <sup>T</sup>	77.02	21.3	putative new species 4
<i>N. transvalensis</i> group	<i>Nocardia</i> sp. RB56	<i>N. stercoris</i> NEAU LL90 <sup>T</sup>	77.11	21.5	putative new species 5
<i>N. transvalensis</i> group	<i>Nocardia</i> sp. BMG51109	<i>N. blacklockiae</i> DSM 45135 <sup>T</sup>	83.56	27.7	putative new species 6
<i>N. transvalensis</i> group	<i>Nocardia</i> sp. RB20	<i>N. vaccinii</i> DSM 43285 <sup>T</sup>	86.53	32.4	putative new species 7
<i>N. transvalensis</i> group	<i>Nocardia</i> sp. NRRL WC3656	<i>N. nova</i> DSM44481 <sup>T</sup>	97.78	81	<i>N. nova</i>
<i>N. transvalensis</i> group	<i>Nocardia</i> sp. 852002-20019_SCH5090214	<i>N. nova</i> DSM44481 <sup>T</sup>	99.13	92.3	<i>N. nova</i>
<i>N. transvalensis</i> group	<i>Nocardia</i> sp. 852002-51101_SCH5132738	<i>N. nova</i> DSM44481 <sup>T</sup>	99.26	93.9	<i>N. nova</i>
<i>N. transvalensis</i> group	<i>Nocardia</i> sp. 852002-51244_SCH5132740	<i>N. nova</i> DSM44481 <sup>T</sup>	99.21	93.5	<i>N. nova</i>
<i>N. transvalensis</i> group	<i>Nocardia</i> sp. MDA0666	<i>N. aobensis</i> DSM44805 <sup>T</sup>	97.06	75.8	<i>N. aobensis</i>
<i>N. otitidiscaviarum</i> group	<i>Nocardia</i> sp. SYP-A9097	<i>N. acidivorans</i> DSM 45049 <sup>T</sup>	87.76	34.7	putative new species 8
<i>N. otitidiscaviarum</i> group	<i>Nocardia</i> sp. CT2-14	<i>N. niigatensis</i> DSM 44670 <sup>T</sup>	87.98	35.2	putative new species 9
<i>N. otitidiscaviarum</i> group	<i>Nocardia</i> sp. ET3-3	<i>N. concava</i> DSM 44804 <sup>T</sup>	86.55	32.3	putative new species 10
outgroup	<i>Nocardia</i> sp. 348MFTsu5.1	<i>Williamsia faeni</i> DSM 45372 <sup>T</sup>	97.6	77.9	<i>Williamsia faeni</i>
outgroup	<i>Nocardia</i> sp. NRRL S-836	<i>Lechevalieria</i> spp	NA	NA	<i>Lechevalieria</i> spp