

**Figure S1.** Alignment of mtSSU rRNA sequences of the present study (NCBI accession numbers [acc. no.] OP738797-OP738809) with published mtSSU rRNA sequences of *P. canis* (NCBI acc. no. MT726216, MT726217), *P. oryctolagi* (NCBI acc. no. NC\_060319), *P. carinii* (NCBI acc. no. JX499145), *P. murina* (NCBI acc. no. JX499144), *P. sp. ludovicianus* (NCBI acc. no. MT726212), *P. sp. macacae* (NCBI acc. no. MT726214), and *P. jirovecii* (NCBI acc. no. JX855936) for confirmation of the affiliation to the genus *Pneumocystis*.

		10	20	30	40	
		.... .... .... .... .... .... .... .... .... ..				
OP738797_P.	sp. bovis	CCACAAAAGTTTCTACAATAGGATGCAAAGATATATTTTACAAAGTCA				
OP738798_P.	sp. ovis	CCACAAAAGTTTCCACAATAGGATGCAAAGATATATTTTACAAAGTCA				
OP738799_P.	sp. caprum	CCACAAAAGTTTCCACAATAGGATGCAAAGATATATTTTACAAAGTCA				
OP738800_P.	sp. rupicaprum	CCACAAAAGTTTCTACAATAGGATGCAAAGATATA--TGTAAGTCA				
OP738801_P.	sp. suis	CCACAAAAATTTCTACAATAGGATGCAAAGATGTATGT--AAGTCA				
OP738802_P.	sp. suis	CCACAAAAATTTCTACAATAGGATGCAAAGATGTATGT--AAGTCA				
OP738803_P.	canis	CTATAAAAATTTCTACAATAGGATGCAAAGAT--G---AAAATTT				
MT726217_P.	canis_Ck1	CTATAAAAATTTCTACAATAGGATGCAAAGAT--G---AAAATTT				
MT726216_P.	canis_Ck2	CTATAAAAATTTCTACAATAGGATGCAAAGAT--G---AAAATCA				
OP738804_P.	sp. vespertilionis	CCACAAAGATTTTCAACAAAGGGATGCAAAAAAT--G---AAAATTA				
OP738805_P.	sp. soricis	CCACAAAGATTTTTTACAAAGGATGCAAAGAT--G---AAAGTTG				
OP738806_P.	leporis	CTACAAAAGTTTCTACAAAGGGAAGCAACAAT--G---AAAATTA				
OP738807_P.	oryctolagi	CTGCAAAAGTTTCTACAAAGGAAGCTAGAAT--G---AAAATTG				
NC_060319_P.	oryctolagi	CTGCAAAAGTTTCTACAAAGGAAGCTAGAAT--G---AAAATTG				
OP738808_P.	sp. equi	CCACAAAAATTTCTACAATAGGATGCAAAGATATAATTATTAAGTCA				
OP738809_P.	carinii	CCACAAATATTTTCTACAAAGGGAAGCAAAGATG-----AAAGTCT				
JX499145_P.	carinii	CCACAAATATTTTCTACAAAGGGAAGCAAAGATG-----AAAGTCT				
JX499144_P.	murina	CCGCAAAAATTTCTACAATGGGAAGCAAAGAT--C---CAAGTCC				
MT726212_P.	sp. ludovicianus	CCACAAATGATTTCTACAATAGGAAGCAAAGATTTTA---AAAGTCA				
MT726214_P.	sp. macacae	CTGCAAAAGTTTCTACAATGGGATGCAAAGAT--T---AAAATCA				
JX855936_P.	jirovecii	CTGCAAAATTTTCTACAATGGGATGCAATGAT--G---AAAGTCG				
		50	60	70	80	90
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OP738797_P.	sp. bovis	GAGCTAATCCCAGAAAGAAATTAATGTACAGATAAGAAATCTGGAAC				
OP738798_P.	sp. ovis	GAGCTAATCCCTGAAAAGAACTAATGTACGGATAAGAAATCTGGAAC				
OP738799_P.	sp. caprum	GAGCTAATCCCTGAAAAGAAATTAATGTACGGATAAGAAATCTGGAAC				
OP738800_P.	sp. rupicaprum	GAGCTAATCCCTGAAAAGAAATTAATGTACAGATAAGAAATCTGGAAC				
OP738801_P.	sp. suis	GAGCTAAACCATGAAAGGAAATTAAGTACGGATAAGAAATCTGGAAC				
OP738802_P.	sp. suis	GAGCTAAACCATGAAAGGAAATTAAGTACGGATAAGAAATCTGGAAC				
OP738803_P.	canis	GAGCTAATCCCTGAAAAGAAATTTTCAGTACAGATAAGAGTCTGAAAC				
MT726217_P.	canis_Ck1	GAGCTAATCCCTGAAAAGAAATTTTCAGTACAGATAAGAGTCTGAAAC				
MT726216_P.	canis_Ck2	GAGCTAATCCCTGAAAGGAAATTTAAGTACAGATAAGAAATCTGAAAC				
OP738804_P.	sp. vespertilionis	GAGCTAATCCT--TAAATAAAAATCATAGTTTCAGATAAGAAATCTGGAAC				
OP738805_P.	sp. soricis	GAGCTAATCCT--TAAAGAAAAATTTTAGTTCCGAATAAGAAATCTGGAAC				
OP738806_P.	leporis	GAGCTAATCCT--CAAAGGAAATTTTCAGTACGGATAAGAAATCTGGAAC				
OP738807_P.	oryctolagi	AAGCCAATCCT--CAAAGGAAATTTTAGTCCGAATAAGAAATCTGGAAC				
NC_060319_P.	oryctolagi	AAGCCAATCCT--CAAAGGAAATTTTAGTCCGAATAAGAAATCTGGAAC				
OP738808_P.	sp. equi	GAGCTAATCCAAGAAAAGAAATTAATGTACAGATAAGAAATCTGGAAC				
OP738809_P.	carinii	GAGCTAATCCT--CAAAGGAAATTAAGTACGGATAAGAAATCTGGAAC				
JX499145_P.	carinii	GAGCTAATCCT--CAAAGGAAATTAAGTACGGATAAGAAATCTGGAAC				
JX499144_P.	murina	GAGCCAATCCT--TAAAGGAAATTAAGTACGGATAAGAAATCTGGAAC				
MT726212_P.	sp. ludovicianus	GAGCTAATCCCTGAAAGGAAATATAAGTACGGATAAGAAATCTGGAAC				
MT726214_P.	sp. macacae	GAGCTAATCCT--TAAAGATATTTTAGTCCGGATAAGTGCCTGGAAC				
JX855936_P.	jirovecii	GAGCTAATCCCCATAAGATTGTTTAGTCCGGATAAGTGCCTGGAAC				

	100	110	120	130	140
	... ... ... ... ... ... ... ... ...				
OP738797_P. sp. bovis	TCGATTCTTTGAAGAAGGAATTGCTAGTAATCGTCTATCATACGAG				
OP738798_P. sp. ovis	TCGATTCTTTGAAGAAGGAATTGCTAGTAATCGTCTATCACCATGAG				
OP738799_P. sp. caprum	TCGATTCTTTGAAGAAGGAATTGCTAGTAATCGTCTATCACCATGAG				
OP738800_P. sp. rupicaprum	TCGATTCTTTGAAGAAGGAATTGCTAGTAATCGTCTATCATCACGAG				
OP738801_P. sp. suis	TCGATTCTTTGAAGAAGGAATTGCTAGTAATCGTCTATCAGCATGAG				
OP738802_P. sp. suis	TCGATTCTTTGAAGAAGGAATTGCTAGTAATCGTCTATCAGCATGAG				
OP738803_P. canis	TCGATTCTTTGAAGATGGAATTGCTAGTAATCGTCTATCAGCATGAG				
MT726217_P. canis_Ck1	TCGATTCTTTGAAGATGGAATTGCTAGTAATCGTCTATCAGCATGAG				
MT726216_P. canis_Ck2	TCGATTCTTTGAAGATGGAATTGCTAGTAATCGTCTATCAGCATGAG				
OP738804_P. sp. vespertilionis	TCGATTCTTTGAAGACGGAATTGCTAATAATCGTCTATCAGCATGAG				
OP738805_P. sp. soricis	TCGATTCTTTGAAGATGGAATTGCTAGTAATCGTCTATCAGCATGAG				
OP738806_P. leporis	TCGATTCTTTGAAGTTGGAATTGCTAGTAATCGTCTATCAGCAAGAG				
OP738807_P. oryctolagi	TCGGTTCTTTGAAGTTGGAATTGCTAGTAATCGTCTATCAGCAAGAG				
NC_060319_P. oryctolagi	TCGGTTCTTTGAAGTTGGAATTGCTAGTAATCGTCTATCAGCAAGAG				
OP738808_P. sp. equi	TCGATTCTTTGAAGAAGGAATTGCTAGTAATCGTCTATCACCATGAG				
OP738809_P. carinii	TCGATTCTTTGAAGAAGGAATTGCTAGTAATCGTTCATCATCAAGGA				
JX499145_P. carinii	TCGATTCTTTGAAGAAGGAATTGCTAGTAATCGTTCATCATCAAGGA				
JX499144_P. murina	TCGATTCTTTGAAGAAGGAATTGCTAGTAATCGTTCATCATCAAGGA				
MT726212_P. sp. ludovicianus	TCGATTCTTTGAAGCAGGAATTGCTAGTAATCGTCCATCAGCATGGG				
MT726214_P. sp. macacae	TCGGCTCTTTGAAGTTGGAATTGCTAGTAATCGTCTATCACCATGAG				
JX855936_P. jirovecii	TCGGCTCTTTGAAGTTGGAATTGCTAGTAATCGTCTATCATCATGAG				

	150	160	170	180
	... ... ... ... ... ... ... ... ... ...			
OP738797_P. sp. bovis	ACGGTGAAACTATCATCTGTGATGTACTAACTACTCGTCAAGCGCAA			
OP738798_P. sp. ovis	ACGGTGAAACAATCATCTGTGATGTACTAACTACTCGTCAAGCGCAA			
OP738799_P. sp. caprum	ACGGTGAAACTATCATCTGTGATGTACTAACTACTCGTCAAGCGCAA			
OP738800_P. sp. rupicaprum	ACGGTGAAACTATCATCTGTGATGTACTAACTACTCGTCAAGCGCAA			
OP738801_P. sp. suis	ACGGTGAAACGACCATCTGTGATGTACTAACTACTCGTCAAGCGCAA			
OP738802_P. sp. suis	ACGGTGAAACGACCATCTGTGATGTACTAACTACTCGTCAAGCGCAA			
OP738803_P. canis	ACGGTGAAAGATAAATCTGTGATGTACTAACTACTCGTCAAGCGCGG			
MT726217_P. canis_Ck1	ACGGTGAAAGATAAATCTGTGATGTACTAACTACTCGTCAAGCGCGG			
MT726216_P. canis_Ck2	ACGGTGAAATAAAAATCTGTGATGTACTAACTACTCGTCAAGCGCGG			
OP738804_P. sp. vespertilionis	ACGGTGAAACGCCATCTGTAAATGTACTAACTACTCGTCAAGCGCGG			
OP738805_P. sp. soricis	ACGGTGAAACAGTCATCTGTGATGTACTAACTACTCGTCAAGCGCAA			
OP738806_P. leporis	ACGGTGAAACTTCTATCTGTGATGTACTAACTACTCGTCAAGCGCGG			
OP738807_P. oryctolagi	ACGGTGAAACTTCTATCTGTGATGTACTAACTACTCGTCAAGCGCGG			
NC_060319_P. oryctolagi	ACGGTGAAACTTCTATCTGTGATGTACTAACTACTCGTCAAGCGCGG			
OP738808_P. sp. equi	ACGGTGAAACTATCATCTGTGATGTACTAACTACTCGTCAAGCGCAA			
OP738809_P. carinii	ACGGTGAAACGAACATCTGTGATGTACTAACTACTCGTCAAGCGCGA			
JX499145_P. carinii	ACGGTGAAACGAACATCTGTGATGTACTAACTACTCGTCAAGCGCGA			
JX499144_P. murina	ACGGTGAAACAAATATCTGTGATGTACTAACTACTCGTCAAGCGCAA			
MT726212_P. sp. ludovicianus	ACGGTGAAACGAACATCTGTGATGTACTAACTACTCGTCAAGCGCAG			
MT726214_P. sp. macacae	ACGGTGAATCTACCATCTGTGATGTACTAACTACTCGTCAAGCGCGG			
JX855936_P. jirovecii	ACGGTGAATCTTTTATCTGTGATGTACTAACTACTCGTCAAGCGCGG			

	190	200	210	220	230
	. .				
OP738797_P. sp. bovis	AAATTTTC	AGGAAATATAAAGTTTA	TACGTC	TATTTCTTAAAGA	--
OP738798_P. sp. ovis	AAATTTT	AGGGAATATCAAGTTTA	TACGTC	TATTTCTTAAAGA	--
OP738799_P. sp. caprum	AAATTTT	AGGAAATATCAAGTTTA	TACGTC	TATTTCTTAAAGA	--
OP738800_P. sp. rupicaprum	AAATTAT	AGGAAATATAAAGTTTA	TACGTC	TATTTCTTAAAGA	--
OP738801_P. sp. suis	AAATTTTT	TAGGAAATATCAAGTATA	TACGTC	TATTTCTTAGAGA	--
OP738802_P. sp. suis	AAATTTTT	TAGGAAATATCAAGTATA	TACGTC	TATTTCTTAGAGA	--
OP738803_P. canis	AAATTGATAAGAAATATCAAGTATA	TACGTC	TATTTCTTAAAGA	--	
MT726217_P.canis_Ck1	AAATTGATAAGAAATATCAAGTATA	TACGTC	TATTTCTTAAAGA	--	
MT726216_P.canis_Ck2	AAATTGATAAGAAATATCAAGTTTA	TACGTC	TATTTCTTAAAGA	--	
OP738804_P. sp. vespertilionis	AAATTTTATAGGGGATACTAAATTT	TACGTC	TATTTCTTAGAGA	--	
OP738805_P. sp. soricis	AAATTTTT	TAGGGAATACTAAGTTT	TACGTC	TATTTCTTAGAGA	--
OP738806_P. leporis	ATATTTTATAGGGAATATCAAGCTC	TGCGTC	TATTCTCTAGAGA	--	
OP738807_P. oryctolagi	ATATTTTATAGGGAATATCAAGCTC	TGCGTC	TATTCTCTAGAGA	--	
NC_060319_P. oryctolagi	ATATTTTATAGGGAATATCAAGCTC	TGCGTC	TATTCTCTAGAGA	--	
OP738808_P. sp. equi	AAATTTT	AGGGAATATCAAGTTTA	TACGTC	TATTTCTTAAAGA	--
OP738809_P. carinii	AAATCATTAAAGAAGTATCAAGTTGATTGAATTTAATTTCTAAAGAGT				
JX499145_P. carinii	AAATCATTAAAGAAGTATCAAGTTGATTGAATTTAATTTCTAAAGAGT				
JX499144_P. murina	AAATCATTAGGGGATATCAAGTTTTGAACGTCATCCCTTAGAAA				
MT726212_P. sp. ludovicianus	AAATTGTTAGGAAATATCAAGTTTTATACGTCATTTTCTAGAGA				
MT726214_P. sp. macacae	AAATTTTACAAGAAATCCAAGTTCT	TACGTC	CAATTTCTTAGAGA	--	
JX855936_P. jirovecii	AAATTTTTTAAAGAAATCAAGTTCT	TACGTC	CAATTTCTTGAGA	--	

	240	250	260	270	280
	. .				
OP738797_P. sp. bovis	-----				
OP738798_P. sp. ovis	-----				
OP738799_P. sp. caprum	-----				
OP738800_P. sp. rupicaprum	-----				
OP738801_P. sp. suis	-----				
OP738802_P. sp. suis	-----				
OP738803_P. canis	-----				
MT726217_P.canis_Ck1	-----				
MT726216_P.canis_Ck2	-----				
OP738804_P. sp. vespertilionis	-----				
OP738805_P. sp. soricis	-----				
OP738806_P. leporis	-----				
OP738807_P. oryctolagi	-----				
NC_060319_P. oryctolagi	-----				
OP738808_P. sp. equi	-----				
OP738809_P. carinii	TAAAGAATTTAACATCTGTAGAAATCAAAGGATTTT	CAGCGTCTATTTT			
JX499145_P. carinii	TAAAGAATTTAACATCTGTAGAAATCAAAGGATTTT	CAGCGTCTATTTT			
JX499144_P. murina	-----				
MT726212_P. sp. ludovicianus	-----				
MT726214_P. sp. macacae	-----				
JX855936_P. jirovecii	-----				

	290	300
	.. .... .... ....	
OP738797_P. sp. bovis	-----	TTTGTGTTAAG
OP738798_P. sp. ovīs	-----	TTTGTGTTAAG
OP738799_P. sp. caprum	-----	TTTGTGTTAAG
OP738800_P. sp. rupicaprum	-----	TTTGTGTTAAG
OP738801_P. sp. suis	-----	TTTGTGTTAAG
OP738802_P. sp. suis	-----	TTTGTGTTAAG
OP738803_P. canis	-----	TCTGTGCTAAG
MT726217_P.canis_Ck1	-----	TCTGTGCTAAG
MT726216_P.canis_Ck2	-----	TCTGTGCTAAG
OP738804_P. sp. vespertilionis	-----	TCTGTGCTAAG
OP738805_P. sp. soricis	-----	TTTGTGCTAAG
OP738806_P. leporis	-----	TTTGTGCTAAG
OP738807_P. oryctolagi	-----	TTTGTGCTAAG
NC_060319_P. oryctolagi	-----	TTTGTGCTAAG
OP738808_P. sp. equi	-----	TTTGTGTTAAG
OP738809_P. carinii		CTAGAAATTTGTGCTAAG
JX499145_P. carinii		CTAGAAATTTGTGCTAAG
JX499144_P. murina	-----	TTTGTGCTAAG
MT726212_P. sp. ludovicianus	-----	TTTGTGCTAAG
MT726214_P. sp. macacae	-----	TCTGTGCTAAG
JX855936_P. jirovecii	-----	TCTGTGCTAAG