

N. australiensis (AJ132034.1)	A	G	A	T	T	C	G	T	T	A	G	C	C	T	C	G	C	G	A	T	T	C	A	T	C	A	A	A	T	T	G	G	T	G	A	A	C	A	C	A	[497]		
N. gruberi (AJ132024.1)	A	G	A	T	T	T	C	G	T	T	A	G	C	C	T	C	G	C	G	A	T	T	C	A	T	C	A	A	A	T	T	G	G	T	G	A	A	C	A	C	A	[497]	
N. gruberi (AJ132031.1)	A	G	A	T	T	T	C	G	T	T	A	G	C	C	T	C	G	C	G	A	T	T	C	A	T	C	A	A	A	T	T	G	G	T	G	A	A	C	A	C	A	[497]	
N. philippinensis (AY033618.1)	A	G	A	T	T	T	C	G	T	T	A	G	C	C	T	C	G	C	G	A	T	T	C	A	T	C	A	A	A	T	T	G	G	T	G	A	A	C	A	C	A	[497]	
N. dobsoni (AJ566627.1)	A	G	A	T	T	T	C	G	T	T	A	G	C	C	T	C	G	C	G	A	T	T	C	A	T	C	A	A	A	T	T	G	G	T	G	A	A	C	A	C	A	[497]	
N. paradobsoni (AM157664.1)	A	G	A	T	T	T	C	G	T	T	A	G	C	C	T	C	G	C	G	A	T	T	C	A	T	C	A	A	A	T	T	G	G	T	G	A	A	C	A	C	A	[497]	
N1	A	G	A	T	T	T	C	G	T	T	A	G	C	C	T	C	G	C	G	A	T	T	C	A	T	C	A	A	A	T	T	G	G	T	G	A	A	C	A	C	A	[497]	
N2.G1	A	G	A	T	T	T	C	G	T	T	A	G	C	C	T	C	G	C	G	A	T	T	C	A	T	C	A	A	A	T	T	G	G	T	G	A	A	C	A	C	A	[497]	
N2.G2	A	G	A	T	T	T	C	G	T	T	A	G	C	C	T	C	G	C	G	A	T	T	C	A	T	C	A	A	A	T	T	G	G	T	G	A	A	C	A	C	A	[497]	
N3.G1	A	G	A	T	T	T	C	G	T	T	A	G	C	C	T	C	G	C	G	A	T	T	C	A	T	C	A	A	A	T	T	G	G	T	G	A	A	C	A	C	A	[497]	
N3.G2	A	G	A	T	T	T	C	G	T	T	A	G	C	C	T	C	G	C	G	A	T	T	C	A	T	C	A	A	A	T	T	G	G	T	G	A	A	C	A	C	A	[497]	
N4.G1	A	G	A	T	T	T	C	G	T	T	A	G	C	C	T	C	G	C	G	A	T	T	C	A	T	C	A	A	A	T	T	G	G	T	G	A	A	C	A	C	A	[497]	
N4.G2	A	G	A	T	T	T	C	G	T	T	A	G	C	C	T	C	G	C	G	A	T	T	C	A	T	C	A	A	A	T	T	G	G	T	G	A	A	C	A	C	A	[497]	
N5.G1	A	G	A	T	T	T	C	G	T	T	A	G	C	C	T	C	G	C	G	A	T	T	C	A	T	C	A	A	A	T	T	G	G	T	G	A	A	C	A	C	A	[497]	
N5.G2	A	G	A	T	T	T	C	G	T	T	A	G	C	C	T	C	G	C	G	A	T	T	C	A	T	C	A	A	A	T	T	G	G	T	G	A	A	C	A	C	A	[497]	
H1	C	G	A	A	T	T	C	G	C	A	G	A	A	T	T	C	G	C	G	A	A	T	T	C	A	C	G	C	A	A	T	C	C	T	C	G	A	A	C	G	C	A	[497]
N. canariensis (FJ475124.1)	A	G	A	T	T	T	C	G	T	T	A	G	C	C	T	C	G	C	G	A	T	T	C	A	T	C	A	A	A	T	T	G	G	T	G	A	A	C	A	C	A	[497]	
N. neodobsoni (AM157661.1)	A	G	A	T	T	T	C	G	T	T	A	G	C	C	T	C	G	C	G	A	T	T	C	A	T	C	A	A	A	T													

N. australiensis (AJ132034.1)	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N. gruberi (AJ132024.1)	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N. gruberi (AJ132031.1)	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N. philippinensis (AY033618.1)	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N. dobsoni (AJ566627.1)	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N. paradoxoni (AM157664.1)	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N1	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N2.G1	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N2.G2	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N3.G1	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N3.G2	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N4.G1	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N4.G2	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N5.G1	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N5.G2	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
H1	T	C	C	G	G	C	G	C	C	T	T	C	C	C	G	G	A	G	C	A	T	G	C	C	C	G	T	C	T	A	G	A	G	C	G	C	T	A	G	T	[551]	
N. canariensis (FJ475124.1)	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N. neodobsoni (AM157661.1)	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
Hartmannella vermiformis (GU001158.1:186-863)	T	C	C	G	G	C	G	C	C	T	T	C	C	C	G	G	A	G	C	A	T	G	C	C	C	G	T	C	T	A	G	A	G	C	G	C	G	T	T	[551]		
N. gruberi (AB298288.1)	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N. gruberi (MG699123.1)	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N. dobsoni (KU380484.1)	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N. sp. 4542 (JQ271648.1)	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N. australiensis (AB128052.1)	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
N. australiensis (AB128053.1)	T	A	C	T	G	G	A	C	C	T	C	T	T	C	G	G	A	G	G	T	A	C	T	T	G	C	G	T	T	A	G	A	G	T	G	C	T	A	G	T	[551]	
Acanthamoeba castellanii (KT185626.1:2448-357)	A	G	T	T	G	C	G	C	C	C	C	C	C	C	G	G	A	G	C	A	C	G	T	T	C	C	G	C	T	T	A	G	A	G	T	G	C	C	G	C	T	[551]
Vermamoeba vermiformis (KT185625.1:2842-350)	T	C	C	G	G	C	G	C	C	T	T	C	C	C	G	G	A	G	C	A	C	G	T	T	G	C	C	G	T	C	T	A	G	A	G	T	G	C	C	T	[551]	
Vahlkampfia avara (LC191903.1)	T	C	C	A	A	T	G	C	C	G	A	A	T	T	G	C	G	A	A	C	A	C	G	C	T	T	A	C	T	T	G	A	G	T	G	C	C	A	G	T	[551]	
Vahlkampfia ciguana (AJ973126.1)	G	A	C	A	A	T	G	C	G	A	G	C	T	G	A	G	A	A	C	G	C	G	T	T	G	C	C	T	G	T	A	G	A	G	T	G	C	C	A	G	T	[551]
Hartmannella sp. (HE617186.1)	T	C	C	G	C	G	C	C	T	C	T	C	C	C	G	G	A	G	C	A	T	G	C	C	C	C	G	C	T	T	A	G	A	G	C	G	C	T	T	[551]		
N. australiensis (AJ132034.1)	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	G	A	A	T	C	G	T	T	A	G	T	T	[618]	
N. gruberi (AJ132024.1)	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	G	A	A	T	C	A	T	T	A	G	T	T	[618]	
N. gruberi (AJ132031.1)	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	G	A	A	T	C	A	T	T	A	G	T	T	[618]	
N. philippinensis (AY033618.1)	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	G	A	A	T	C	A	T	T	A	G	T	T	[618]	
N. dobsoni (AJ566627.1)	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	A	A	T	C	T	T	T	A	G	T	T	[618]		
N. paradoxoni (AM157664.1)	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	G	A	A	T	C	A	T	T	A	G	T	T	[618]	
N1	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	G	A	A	T	C	A	T	T	A	G	T	T	[618]	
N2.G1	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	G	A	A	T	C	A	T	T	A	G	T	T	[618]	
N2.G2	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	G	A	A	T	C	A	T	T	A	G	T	T	[618]	
N3.G1	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	G	T	T	T	A	A	T	C	A	T	T	A	G	T	T	[618]	
N3.G2	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	T	A	A	T	C	T	T	T	A	G	T	T	[618]	
N4.G1	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	G	A	A	T	C	A	T	T	A	G	T	T	[618]	
N4.G2	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	G	A	A	T	C	A	T	T	A	G	T	T	[618]	
N5.G1	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	G	A	A	T	C	A	T	T	A	G	T	T	[618]	
N5.G2	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	G	A	A	T	C	A	T	T	A	G	T	T	[618]	
H1	C	C	C	A	T	C	C	C	T	C	A	G	A	C	T	G	T	C	C	G	A	A	G	G	T	A	G	G	T	G	A	T	C	G	G	A	C	G	T	[618]		
N. canariensis (FJ475124.1)	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	G	A	A	T	C	A	T	T	A	G	T	T	[618]	
N. neodobsoni (AM157661.1)	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	G	A	A	T	C	A	T	T	A	G	T	T	[618]	
Hartmannella vermiformis (GU001158.1:186-863)	C	C	A	A	T	C	C	C	A	A	C	G	A	C	T	G	A	T	T	A	A	A	G	G	A	T	G	G	G	C	G	A	T	C	G	G	A	C	A	G	[618]	
N. gruberi (AB298288.1)	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	G	A	A	T	C	A	T	T	A	A	T	T	[618]	
N. gruberi (MG699123.1)	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	G	A	A	T	C	A	T	T	A	A	T	T	[618]	
N. dobsoni (KU380484.1)	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	T	A	A	T	C	T	T	T	A	G	T	T	[618]	
N. sp. 4542 (JQ271648.1)	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	T	A	A	T	C	T	T	T	A	G	T	T	[618]	
N. australiensis (AB128052.1)	T	T	T	A	T	C	A	A	T	T	G	A	T	C	T	G	G	T	A	A	A	G	G	T	G	T	T	T	G	A	A	T	C	A	T	T	A	G	T	T	[618]	
N.																																										

N. australiensis (AJ132034.1)	T	T	C	C	G	T	C	T	T	T	G	A	C	T	G	G	T	C	A	A	T	C	A	T	T	A	T	T	[782]			
N. gruberi (AJ132024.1)	T	T	C	C	T	G	T	T	T	T	G	A	C	T	A	G	T	C	A	A	T	C	T	T	T	?	?	A	T	T	[782]	
N. gruberi (AJ132031.1)	T	T	C	C	T	G	T	T	T	T	G	A	C	T	A	G	T	C	A	A	T	C	T	T	T	?	?	A	T	T	[782]	
N. philippinensis (AY033618.1)	T	T	C	C	G	G	T	T	T	T	G	A	C	T	A	G	T	C	A	A	T	C	C	T	T	G	T	A	T	T	[782]	
N. dobsoni (AJ566627.1)	T	C	C	T	G	A	G	T	T	T	G	A	A	C	T	G	G	A	T	T	A	C	G	C	T	C	T	G	A	T	C	[782]
N. paradobsoni (AM157664.1)	T	C	C	T	G	A	G	T	T	T	G	A	A	C	T	G	G	A	T	T	A	C	G	C	T	C	T	G	A	T	C	[782]
N1	T	T	C	C	G	A	A	T	T	T	G	A	C	T	A	G	T	C	A	A	T	C	C	T	T	T	T	A	T	T	[782]	
N2.G1	T	T	C	C	G	G	T	T	T	T	G	A	C	T	A	G	T	C	A	A	T	C	C	T	T	G	T	A	T	T	[782]	
N2.G2	T	T	C	C	G	G	T	T	T	T	G	A	C	T	A	G	T	C	A	A	T	C	C	T	T	G	T	A	T	T	[782]	
N3.G1	T	C	C	T	G	A	G	T	T	T	G	A	A	C	T	G	G	A	T	T	A	C	G	C	T	C	T	G	A	T	C	[782]
N3.G2	T	C	C	T	G	A	G	T	T	T	G	A	A	C	T	G	G	A	T	T	A	C	G	C	T	C	T	G	A	T	C	[782]
N4.G1	T	T	C	C	G	T	C	T	T	T	G	A	C	T	G	G	T	C	A	A	T	C	A	T	T	T	T	A	T	T	[782]	
N4.G2	T	T	C	C	G	T	C	T	T	T	G	A	C	T	G	G	T	C	A	A	T	C	A	T	T	T	T	A	T	T	[782]	
N5.G1	T	T	C	C	T	G	T	T	T	T	G	A	C	T	A	G	T	C	A	A	T	C	T	T	T	T	T	A	T	T	[782]	
N5.G2	T	T	C	C	G	G	T	T	T	T	G	A	C	T	A	G	T	C	A	A	T	C	T	T	T	T	T	A	T	T	[782]	
H1	G	A	C	T	G	A	G	G	C	G	G	C	C	C	G	A	T	C	C	A	T	C	C	T	C	C	G	G	T	C	[782]	
N. canariensis (FJ475124.1)	T	T	C	C	G	A	A	T	T	T	G	A	C	T	A	G	T	C	A	A	T	C	C	T	T	T	T	A	T	T	[782]	
N. neodobsoni (AM157661.1)	T	C	C	T	G	A	G	T	T	T	G	A	A	C	T	G	G	A	T	T	A	C	G	C	T	C	T	A	A	T	C	[782]
Hartmannella vermiformis (GU001158.1:186-863)	G	A	C	G	G	A	G	G	T	G	C	C	C	T	A	A	T	C	C	A	T	T	C	T	C	T	C	G	T	C	[782]	
N. gruberi (AB298288.1)	T	T	C	C	T	G	T	T	T	T	G	A	C	T	A	G	T	C	A	A	T	C	T	T	T	T	T	A	T	T	[782]	
N. gruberi (MG699123.1)	T	T	C	C	T	G	T	T	T	T	G	A	C	T	A	G	T	C	A	A	T	C	T	T	T	T	T	A	T	T	[782]	
N. dobsoni (KU380484.1)	T	C	C	T	G	A	G	T	T	T	G	A	A	C	T	G	G	A	T	T	A	C	G	C	T	C	T	G	A	T	C	[782]
N. sp. 4542 (JQ271648.1)	T	C	C	T	G	A	G	T	T	T	G	A	A	C	T	G	G	A	T	T	A	C	G	C	T	C	T	G	A	T	C	[782]
N. australiensis (AB128052.1)	T	T	C	C	G	T	C	T	T	T	G	A	C	T	G	G	T	C	A	A	T	C	A	T	T	T	T	A	T	T	[782]	
N. australiensis (AB128053.1)	T	T	C	C	G	T	C	T	T	T	G	A	C	T	G	G	T	C	A	A	T	C	A	T	T	T	T	A	T	T	[782]	
Acanthamoeba castellanii (KT185626.1:2448-357)	T	G	C	C	A	A	C	A	T	T	G	G	T	C	G	G	T	G	T	G	T	G	T	T	G	G	G	G	T	T	[782]	
Vermamoeba vermiformis (KT185625.1:2842-350)	G	A	C	G	G	A	G	G	T	G	C	C	C	T	G	A	A	C	C	A	T	T	C	T	C	T	C	G	T	C	[782]	
Vahlkampfia avara (LC191903.1)	T	G	T	A	A	A	C	T	C	T	G	T	G	A	G	G	G	T	T	A	C	C	C	T	T	T	A	A	G	C	[782]	
Vahlkampfia ciguana (AJ973126.1)	C	A	T	A	A	A	C	T	C	T	G	C	G	A	G	G	G	T	T	A	C	C	C	T	T	T	A	A	G	C	[782]	
Hartmannella sp. (HE617186.1)	G	A	C	T	G	A	G	G	C	G	G	C	C	C	G	A	T	C	C	A	T	C	C	T	C	C	G	G	T	C	[782]	