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Mycobacterium chelonae-abscessus Complex Associated with Sinopulmonary Disease, Northeastern USA

Technical Appendix

Technical Appendix Table 1. Study isolates and sequevar group for the 16S rRNA, *rpoB, sodA, hsp65* genes and ITS region of *the Mycobacterium chelonae-abscessus* complex *

Isolate no.	16S rRNA sequevar group	*rpoB* sequavar group	*sodA* sequevar group	*hsp65* sequevar group	*ITS* sequevar group
M. abscessus isolates					
A001	ABS[A]	ABS[C]	ABS[A]	ABS[A]	ABS[C]
A003	ABS[A]	ABS[A]	ABS[A]	ABS[A]	ABS[C]
A004	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A005	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A006	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A007	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A010	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A011	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A014	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A015	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A017	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A020	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A021	ABS[B]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A023	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A024	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A029	ABS[A]	ABS[C]	ABS[A]	ABS[A]	ABS[C]
A030	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A032	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A033	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A034	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A035	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A036	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A039	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A041	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A042	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A043	ABS[A]	ABS[C]	ABS[A]	ABS[A]	ABS[C]
A044	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A046	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A047	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A048	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A049	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A050	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A051	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A052	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A053	ABS[A]	ABS[D]	ABS[C]	ABS[B]	ABS[D]
A054	ABS[A]	ABS[B]	ABS[B]	ABS[B]	ABS[A]
A056	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A057	ABS[A]	ABS[C]	ABS[A]	ABS[A]	ABS[C]
A058	ABS[A]	ABS[C]	ABS[A]	ABS[A]	ABS[C]
A059	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A060	ABS[A]	ABS[C]	ABS[A]	ABS[A]	ABS[C]
A061	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A063	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[B]
A064	ABS[A]	ABS[C]	ABS[C]	ABS[B]	ABS[D]

A065	ABS[A]	ABS[C]	ABS[C]	ABS[B]	ABS[D]
A066	ABS[A]	ABS[C]	ABS[C]	ABS[B]	ABS[D]
A067	ABS[A]	ABS[D]	ABS[C]	ABS[B]	ABS[D]
A068	ABS[A]	ABS[D]	ABS[C]	ABS[B]	ABS[D]
A069	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A070	ABS[A]	ABS[D]	ABS[C]	ABS[B]	ABS[D]
A071	ABS[A]	ABS[D]	ABS[C]	ABS[B]	ABS[D]
A072	ABS[A]	ABS[D]	ABS[C]	ABS[B]	ABS[D]
A073	ABS[A]	ABS[C]	ABS[D]	ABS[C]	ABS[D]
A074	ABS[A]	ABS[D]	ABS[C]	ABS[B]	ABS[A]
A075	ABS[A]	ABS[D]	ABS[C]	ABS[B]	ABS[A]
A076	ABS[A]	ABS[D]	ABS[C]	ABS[B]	ABS[A]
A077	ABS[A]	ABS[D]	ABS[C]	ABS[B]	ABS[D]
A078	ABS[A]	ABS[D]	ABS[C]	ABS[B]	ABS[A]
A079	ABS[A]	ABS[C]	ABS[C]	ABS[B]	ABS[D]
A080	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
A081	ABS[B]	ABS[D]	ABS[C]	ABS[B]	ABS[D]
A082	ABS[B]	ABS[D]	ABS[C]	ABS[B]	ABS[D]
A083	ABS[B]	ABS[D]	ABS[C]	ABS[B]	ABS[D]
M. abscessus CIP 104536^{T}	ABS[A]	ABS[C]	ABS[B]	ABS[B]	ABS[D]
M. bolletii isolates					
M. bolletii CIP 108541^{T}	ABS[A]	BOL	BOL	BOL	ABS[D]
M. chelonae isolates					
C001	CHE[A]	CHE[G]	CHE[E]	CHE[C]	CHE[G]
C002	CHE[A]	CHE[A]	CHE[B]	CHE[A]	CHE[E]
C003	CHE[A]	CHE[A]	CHE[A]	CHE[A]	CHE[A]
C004	CHE[A]	CHE[B]	CHE[A]	CHE[A]	CHE[F]
C005	CHE[A]	CHE[E]	CHE[C]	CHE[A]	CHE[H]
C006	CHE[A]	CHE[A]	CHE[B]	CHE[A]	CHE[E]
C009	CHE[A]	CHE[G]	CHE[E]	CHE[C]	CHE[G]
C010	CHE[A]	CHE[A]	CHE[A]	CHE[A]	CHE[A]
C011	CHE[A]	CHE[A]	CHE[A]	CHE[A]	CHE[A]
C012	CHE[A]	CHE[A]	CHE[A]	CHE[A]	CHE[A]
C013	CHE[A]	CHE[F]	CHE[D]	CHE[A]	CHE[C]
C014	CHE[A]	CHE[C]	CHE[B]	CHE[A]	CHE[F]
C015	CHE[A]	CHE[G]	CHE[E]	CHE[C]	CHE[G]
C016	CHE[D]	CHE[H]	CHE[E]	CHE[C]	CHE[I]
C017	CHE[A]	CHE[A]	CHE[A]	CHE[A]	CHE[A]
C018	CHE[A]	CHE[A]	CHE[A]	CHE[A]	CHE[A]
C019	CHE[A]	CHE[C]	CHE[B]	CHE[A]	CHE[F]
C020	CHE[A]	CHE[E]	CHE[C]	CHE[B]	CHE[J]
C021	CHE[A]	CHE[C]	CHE[B]	CHE[A]	CHE[F]
C022	CHE[D]	CHE[I]	CHE[G]	CHE[C]	CHE[I]
C023	CHE[A]	CHE[C]	CHE[B]	CHE[A]	CHE[F]
C024	CHE[A]	CHE[A]	CHE[B]	CHE[A]	CHE[E]
C025	CHE[B]	CHE[C]	CHE[B]	CHE[A]	CHE[F]
C026	CHE[A]	CHE[H]	CHE[E]	CHE[D]	CHE[D]
C027	CHE[A]	CHE[E]	CHE[C]	CHE[A]	CHE[H]
C029	CHE[A]	CHE[G]	CHE[C]	CHE[E]	CHE[G]
C031	CHE[A]	CHE[A]	CHE[B]	CHE[A]	CHE[E]
C032	CHE[C]	CHE[A]	CHE[A]	CHE[A]	CHE[A]
C033	CHE[A]	CHE[G]	CHE[C]	CHE[E]	CHE[G]
C034	CHE[B]	CHE[C]	CHE[B]	CHE[A]	CHE[F]
C035	CHE[A]	CHE[C]	CHE[B]	CHE[A]	CHE[F]
C038	CHE[A]	CHE[C]	CHE[B]	CHE[A]	CHE[F]
C039	CHE[A]	CHE[A]	CHE[B]	CHE[A]	CHE[B]
C040	CHE[A]	CHE[C]	CHE[B]	CHE[A]	CHE[F]
C041	CHE[A]	CHE[C]	CHE[B]	CHE[A]	CHE[F]
C042	CHE[A]	CHE[C]	CHE[B]	CHE[A]	CHE[F]
C043	CHE[A]	CHE[A]	CHE[H]	CHE[A]	CHE[E]
C044	CHE[D]	CHE[I]	CHE[G]	CHE[C]	CHE[I]
C045	CHE[A]	CHE[E]	CHE[C]	CHE[A]	CHE[H]
C047	CHE[A]	CHE[A]	CHE[A]	CHE[A]	CHE[A]
C048	CHE[A]	CHE[C]	CHE[B]	CHE[A]	CHE[F]
C050	CHE[A]	CHE[D]	CHE[C]	CHE[E]	CHE[G]
C051	CHE[D]	CHE[I]	CHE[G]	CHE[C]	CHE[I]

C052	CHE[A]	CHE[C]	CHE[B]	CHE[A]	CHE[F]
C053	CHE[A]	CHE[A]	CHE[A]	CHE[A]	CHE[A]
C054	CHE[A]	CHE[A]	CHE[B]	CHE[A]	CHE[E]
C055	CHE[A]	CHE[E]	CHE[C]	CHE[A]	CHE[H]
C056	CHE[A]	CHE[C]	CHE[B]	CHE[A]	CHE[F]
C057	CHE[A]	CHE[A]	CHE[A]	CHE[A]	CHE[A]
C058	CHE[A]	CHE[C]	CHE[B]	CHE[A]	CHE[F]
C059	CHE[A]	CHE[A]	CHE[B]	CHE[A]	CHE[E]
C060	CHE[A]	CHE[G]	CHE[F]	CHE[E]	CHE[H]
C061	CHE[A]	CHE[E]	CHE[C]	CHE[A]	CHE[F]
C062	CHE[A]	CHE[C]	CHE[B]	CHE[A]	CHE[H]
C063	CHE[A]	CHE[C]	CHE[B]	CHE[A]	CHE[F]
C064	CHE[A]	CHE[E]	CHE[C]	CHE[A]	CHE[H]
C065	CHE[A]	CHE[H]	CHE[I]	CHE[E]	CHE[K]
C066	CHE[A]	CHE[C]	CHE[B]	CHE[A]	CHE[F]
M. chelonae ATCC 35758[T]	CHE[E]	CHE[J]	CHE[J]	CHE[F]	CHE[L]
M.immunogenum isolates					
M. immunogenum CIP 106684[T]	IMM	IMM	IMM	IMM	IMM
M. massiliense isolates					
M001	MAS[B]	MAS[A]	ABS[A]	ABS[A]	ABS[C]
M002	MAS[B]	MAS[A]	ABS[A]	ABS[A]	ABS[C]
M003	ABS[A]	MAS[B]	ABS[A]	ABS[A]	ABS[C]
M004	ABS[A]	MAS[B]	ABS[A]	ABS[A]	ABS[C]
M005	MAS[B]	MAS[A]	ABS[A]	ABS[A]	ABS[C]
M. massiliense CCUG 48898[T]	ABS[A]	MAS[C]	ABS[A]	ABS[A]	ABS[C]
Novel species					
CV002	CHE[E]	CV[B]	CV[B]	CV[B]	CV[B]
CV004	CHE[E]	CV [A]	CV [A]	CV [A]	CV [A]
CV005	CHE[E]	CV[B]	CV[B]	CV[B]	CV[B]
CV006	CHE[E]	CV [A]	CV [A]	CV [A]	CV [A]
CV007	CHE[E]	CV[B]	CV[B]	CV[B]	CV[B]
CV008	CHE[E]	CV[B]	CV[B]	CV[B]	CV[B]
CV010	CHE[E]	CV[B]	CV[B]	CV[B]	CV[B]
CV012	CHE[E]	CV[B]	CV[B]	CV[B]	CV[B]
CV013	CHE[E]	CV [A]	CV [A]	CV [A]	CV [A]
CV014	CHE[E]	CV [A]	CV [A]	CV [A]	CV [A]
CV015	CHE[E]	CV [A]	CV [A]	CV [A]	CV [A]
CV021	NA	CV[B]	NA	NA	NA
CV022	NA	CV[D]	NA	NA	NA
CV023	NA	CV[D]	NA	NA	NA
CV024	NA	CV [A]	NA	NA	NA
CV025	NA	CV[C]	NA	NA	NA
CV026	NA	CV[D]	NA	NA	NA
CV027	NA	CV [A]	NA	NA	N/
CV028	NA	CV[B]	NA	NA	NA
CV030	NA	CV[B]	NA	NA	NA
CV031	NA	CV[C]	NA	NA	NA
CV032	NA	CV[C]	NA	NA	NA
CV033	NA	CV[B]	NA	NA	NA
CV034	NA	CV[B]	NA	NA	NA
CV035	NA	CV[B]	NA	NA	NA
CV036	NA	CV[A]	NA	NA	NA

*ITS, internal transcribed spacer; CIP, Collection of Institut Pasteur; NA, not applicable.

Technical Appendix Table 2. Gene designations and corresponding GenBank accession numbers of study isolates and reference sequences from *Mycobacterium abscessus**

Gene name	Alignment gene length, bp	*M. abscessus* ORF designation	*M. abscessus* (NC_010397) Protein ID#	GenBank accession nos. for study isolates
Translation initiation factor IF-3 (*infC*)	531	MAB_2321	YP_001703056	HQ661899– HQ661904
S-adenosyl-methyltransferase (*mraW*)	1014	MAB_1998	YP_001702734	HQ661905– HQ661910
Phosphatidate cytidylyltransferase (*cdsA*)	879	MAB_3186c	YP_001703917	HQ661911– HQ661916
Phosphoribosylaminoimidazole carboxylase (*purE*)	501	MAB_3619c	YP_001704347	HQ661917– HQ661922
Preprotein translocase subunit (*secY*)	1260	MAB_3784c	YP_001704513	HQ661923– HQ661928
(HSP-70 cofactor (*grpE*)	753	MAB_4272c	YP_001704999	HQ661929– HQ661934
Recombination protein (*recR*)	609	MAB_0320	YP_001701073	HQ661935–HQ661940
Ribonuclease P protein component (*rnpA*)	384	MAB_4954c	YP_001705676	HQ661941–HQ661946
Elongation factor Ts (*tsf*)	834	MAB_3195c	YP_001703926	HQ661947–HQ661952
Hypothetical protein Lactamase_B	1692	MAB_3083c	YP_001703815	HQ661953–HQ661958
50S ribosomal protein L7/L12 (*rplL*)	390	MAB_3876c	YP_001704604	HQ661959–HQ661964
50S ribosomal protein L13 (*rplM*)	444	MAB_3752c	YP_001704480	HQ661965–HQ661970
Co-chaperonin GroES (*groE*S)	300	MAB_3732c	YP_001704460	HQ661971–HQ661976
30S ribosomal protein S1 *(rpsA*)	1446	MAB_2296	YP_001703031	HQ661977–HQ661982
Phosphoribosylformylglycinamidine synthase II (*purL*)	2286	MAB_0707	YP_001701457	HQ661983–HQ661988
Putative Mrp homolog protein	1137	MAB_1366c	YP_001702106	HQ661989–HQ661994
Putative metalloprotease	513	MAB_1669	YP_001702408	HQ661995–HQ662000
50S ribosomal protein L20 (*rplT*)	390	MAB_2323	YP_001703058	HQ662001–HQ662006
ABC transporter ATP-binding protein	720	MAB_2747c	YP_001703480	HQ662007–HQ662012
Guanylate kinase	501	MAB_2823c	YP_001703556	HQ662013–HQ662018
Elongation factor P (*ef*P)	564	MAB_2837c	YP_001703570	HQ662019–HQ662024
Deoxyuridine 5'-triphosphate nucleotidohydrolase (*dut*)	453	MAB_3003c	YP_001703735	HQ662025–HQ662030
30s ribosomal protein S2 (*rpsB*)	849	MAB_3196c	YP_001703927	HQ662031–HQ662036
Aspartyl/glutamyl-tRNA amidotransferase, B subunit (*gatB*)	1482	MAB_3334c	YP_001704064	HQ662037–HQ662042
30s ribosomal protein S9 (*rpsI*)	534	MAB_3751c	YP_001704479	HQ662043–HQ662048
50S ribosomal protein L6 (*rplF*)	540	MAB_3797c	YP_001704526	HQ662049–HQ662054
Transcription antitermination protein NusG (*nusG*)	804	MAB_3894c	YP_001704622	HQ662055–HQ662060
Adenylosuccinate synthetase (*purA*)	1296	MAB_4249c	YP_001704976	HQ662061–HQ662066
Cell division protein FtsZ *(ftsZ*)	1164	MAB_2009	YP_001702745	HQ662067–HQ662072
Recombinase A (*recA*)	1041	MAB_3060c	YP_001703792	HQ662073–HQ662078
Tyrosyl-tRNA synthetase *(tyrS*)	1293	MAB_2354	YP_001703089	HQ662079–HQ662084
UDP-N-acetylglucosamine pyrophosphorylase (*glmU*)	1452	MAB_1148c	YP_001701890	HQ662085–HQ662090
Valyl-tRNA synthetase (*valS*)	2643	MAB_1603	YP_001702342	HQ662091–HQ662096
Crossover junction endodeoxyribonuclease (*ruvC*)	510	MAB_2884c	YP_001703617	HQ662097–HQ662102
DNA-directed RNA polymerase subunit beta (*rpoC*)	3960	MAB_3868c	YP_001704596	HQ662103–HQ662108
DNA repair protein RecN (*recN*)	1770	MAB_2361	YP_001703096	HQ662109–HQ662114
GTP-dependent nucleic acid-binding protein (*ychF*)	1074	MAB_1266	YP_001702008	HQ662115–HQ662120
GTP-binding protein Era (*era*)	915	MAB_1672	YP_001702411	HQ662121–HQ662126
Hypothetical protein MAB2781c	978	MAB_2781c	YP_001703514	HQ662127–HQ662132
Nicotinate-nucleotide adenylyltransferase (*nadD*)	638	MAB_1621	YP_001702360	HQ662133–HQ662138
50S ribosomal protein L10 (*rplJ*)	531	MAB_3877c	YP_001704605	HQ662139–HQ662144
50S ribosomal protein L35 (*rpmI*)	195	MAB_2322	YP_001703057	HQ662145–HQ662150
Putative Holliday junction resolvase	522	MAB_2850c	YP_001703583	HQ662151–HQ662156

*ORF, open reading frame; ID, identification

Technical Appendix Table 3. Similarity table of the average (range) of percent identity between concatenated DNA sequences of 43 genes of the *Mycobacterium chelonae-abscessus* complex type strains and CV002*

Strains	Average % identity (range)					
	M. abscessus CIP 104536Ta	*M. bolletii* CIP 108541^{T}	*M. chelonae* ATCC 35752^{T}	CV002 (*M. chelonae* variant)	*M. massiliense* CCUG 48898^{T}	*M. immunogenum* CIP 106684^{T}
M. abscessus CIP 104536Ta	–	98.3 (94.4–99.8)	89.1 (80.7–97.3)	90.0 (83.5–97.3)	98.2 (92.2–100)	91.4 (83.9–98.0)
M. bolletii CIP 108541^{T}		–	89.3 (80.7–98.0)	90.1 (83.8–98.0)	98.2 (95.1–100)	91.5 (84.1–98.3)
M. chelonae ATCC 35752^{T}			–	90.0 (82.2–98.3)	89.3 (81.0–97.7)	89.6 (81.0–98.0)
CV02				–	90.1 (83.8–97.7)	90.5 (83.4–99.7)
M. massiliense CCUG 48898^{T}		+			–	91.7 (83.9–99.2)

*Sequences derived from GenBank accession no. NC_010397. CIP, Collection of Institut Pasteur.

Technical Appendix Table 4. Similarity table of the average (range) of percent identity between concatenated amino acid sequences of 43 genes of the *Mycobacterium chelonae-abscessus* complex type strains and CV002*

Strains	Average % identity (range)					
	M. abscessus CIP 104536^{T}	*M. bolletii* CIP 108541^{T}	*M. chelonae* ATCC 35752^{T}	CV002 (*M. chelonae* variant)	*M. massiliense* CCUG 48898^{T}	*M. immunogenum* CIP 106684^{T}
M. abscessus CIP 104536^{T}	–	99.6 (97.6–100)	95.6 (83.7–100)	95.9 (87.3–100)	99.5 (97.8–100)	97.2 (88.3–100)
M. bolletii CIP 108541^{T}		–	95.7 (84.5–100)	95.9 (88.0–100)	99.5 (98.2–100)	97.2 (88.3–100)
M. chelonae ATCC 35752^{T}			–	95.8 (84.1–100)	95.6 (84.5–100)	95.9 (84.1–100)
CV002				–	95.9 (88.0–100)	96.1 (86.5–100)
M. massiliense CCUG 48898^{T}					–	97.2 (88.3–100)

*CIP, Collection of Institut Pasteur.

Technical Appendix Table 5. Comparison of DNA-DNA hybridization results of patient isolates and phylogenetically related type strains of *the Mycobacterium chelonae-abscessus* complex*

Unlabeled DNA	% similarity to radiolabeled CV002		% similarity to radiolabeled CV005	
	RBR at 70°C	% Divergence	RBR at 70°C	% Divergence
CV002	100	0.0	100	0.5
CV004	80	1.5		
CV005	66	0.0	100	0.0
CV006	96	2.0		
CV015	94	2.0		
M. abscessus CIP 104536^{T}	66	6.0		
M. bolletii CIP 108541^{T}	15	6.0		
M. chelonae ATCC 35752^{T}	42	8.0		
M. immunogenum CIP 106684^{T}	65	5.0		
M. massiliense CCUG 48898^{T}	69	6.5		
M. salmoniphilum ATCC 13758^{T}	41	6.5		

*RBR, relative binding ratio (see text for full definition); CIP, Collection of Institut Pasteur.

Technical Appendix Table 6. Case histories of patients with CV recovered during study*

Isolate no.	Year isolated	Patient age, y/sex	State	Source	Underlying condition	Symptoms	Treatment	Outcome
CV002	2005	9/M	NY	Skin lesion	Unknown	Unknown	Unknown	Unknown
CV004	2007	5/M	PA	Central line port	Medulloblastoma, chemotherapy	Erythema and purulent discharge at central line site	Levofloxacin, cefoxitin, clarithromycin	Infection resolved
CV005	2007	2/F	PA	Bronchial wash	Esotropia, vocal cord paralysis, and gastro-duodenal fistula	Cough	Unknown	Infection resolved
CV006	2007	10/F	PA	Liver biopsy	Relapsed acute lymphoblastoma leukemia	Biopsy-confirmed granulomatous liver lesions	Clindamycin, ceftazidime	Infection resolved
CV007	2007	41/F	PA	Sputum	Primary ciliary dyskinesia, bronchiectasis and prior *Mycobacterium avium-intracellulare* and *M. abscessus* infection	Dyspnea and increased sputum for several months	Intravenous cefepime for 3 weeks	Symptoms improved
CV008	2007	64/F	PA	Sputum	Prednisone therapy, bronchiectasis, multiple episodes of pneumonia and autoimmune hepatitis	Dyspnea and increased sputum production for 3 weeks	10-d course of fluoroquinolone	Respiratory function subjectively and radiographically improved
CV010	2007	72/F	PA	Sputum	Unknown	Unknown	Unknown	Unknown
CV012	2007	63/F	PA	Maxillary sinus	Unknown	Unknown	Unknown	Unknown
CV013	2007	45/F	PA	Sputum	Cystic fibrosis and prior *Mycobacterium avuim* infection	Worsening cough, sputum production and dyspnea. Chest CT scan showed bilateral bronchiectasis and tree in bud opacities	At time of presentation, receiving azithromycin, ethambutol and rifampin for *M. avium*; continued on same regimen for several months	Symptoms subjectively improved and follow up cultures were repeatedly negative for *M. avium* and rapidly growing mycobacteria
CV014	2007	74/F	PA	Sputum	Unknown	Three isolates recovered over 3- year period	Unknown	Unknown
CV015	2008	10/M	PA	Sputum	Eczema	Fever, sore throat, stomatitis, and drooling. HSV-1 PCR sputum/saliva positive	Acyclovir	Lost to follow-up
CV021	2008	76/M	NJ	Bronchial wash	Unknown	Unknown	Unknown	Unknown
CV022	2008	58/F	MN	Sputum	Unknown	Unknown	Unknown	Unknown
CV023	2009	69/M	VA	Respiratory	Unknown	Unknown	Unknown	Unknown
CV024	2009	78/F	ME	Respiratory	Unknown	Unknown	Unknown	Unknown
CV025	2009	73/F	OR	Body fluid	Unknown	Unknown	Unknown	Unknown
CV026	2009	18/M	CO	Sputum	Unknown	Unknown	Unknown	Unknown
CV027	2009	18/M	PA	Sputum	Diabetes	Lung injury following smoke inhalation from house fire. Diagnosed with pulmonary mucormycosis by BAL. Weeks later developed respiratory failure and pulmonary hemorrhage	Unknown	Patient died
CV028	2009	38/F	ME	Sputum	Unknown	Unknown	Unknown	Unknown
CV030	2009	48/F	ME	Sputum	Unknown	Unknown	Unknown	Unknown
CV031	2009	53/F	ND	Bronchial lavage	Unknown	Unknown	Unknown	Unknown

CV032	2009	1/M	NJ	Blood	Unknown	Unknown	Unknown	Unknown
CV033	2009	73/M	PA	Maxillary sinus	Unknown	Unknown	Unknown	Unknown
CV034	2009	44/F	PA	Maxillary sinus	Maxillary sinus surgery for chronic sinusitis	Two weeks postoperatively had routine follow-up and complained of nasal drainage.	None	Nasal drainage resolved over several weeks without antimicrobial therapy
CV035	2010	66/F	PA	Thigh lesion	Diabetes	Erythematous 2-cm indurated plaque to a 3.5- x 3.5-cm lesion. First skin biopsy showed granulomatous reaction. Subsequent biopsies showed abscess and adjacent leukocytoclastic vasculitis	Unknown	Unknown
CV036	2010	47/M	PA	Maxillary sinus	Unknown	Unknown	Unknown	Unknown

*CV, *Mycobacterium chelonae* variant; CT, computed tomography; HSV-1, herpes simplex virus 1.