

TABLE I  
List of primers used in this study

Target gene	Primer	Sequence (5'-3')	TM (°C)	Fragment size (bp)	Reference
<i>rrs</i>	<i>rrs</i> 420 Forward	TTCACCATCGACGAAGGTCC	62	571	Via et al. <sup>(4)</sup>
	<i>rrs</i> 990 Reverse	CTAGACGCGTCCTGTGCATGT			
	<i>rrs</i> P2	GAGTACGGCCGCAAGGCTA	66	680	Machado <sup>(6)</sup> Alangaden et al. <sup>(2)</sup>
	<i>rrs</i> 1539	GGGGCGTTTTTCGTGGTGCTCC			
<i>fabG-inhA</i>	<i>inhA</i> Forward	CCTCGCTGCCCAGAAAGGGA	64	248	Gonçalves et al. <sup>(5)</sup>
	<i>inhA</i> Reverse	ATCCCCGGTTTTCTCCGGT			
<i>katG</i>	<i>katG</i> Forward	GCAGATGGGGCTGATCTACG	60	555	
	<i>katG</i> Reverse	AACTCGTCGGCCAATTCCTC			
<i>gyrA</i>	<i>gyrA</i> Forward	ATCGCCGGGTGCTCTATG	60	321	Machado <sup>(6)</sup>
	<i>gyrA</i> Reverse	GGCCGTCGTAGTTAGGGATG			
<i>gyrB</i>	<i>gyrB</i> Forward	GTCGTTGTGAACAAGGCTGTG		413	
	<i>gyrB</i> Reverse	GTGAAATATGTTGGCCGTC			
<i>rpoB</i>	<i>rpoB</i> Forward	GGGAGCGGATGACCACCCA	60	350	Portugal et al. <sup>(3)</sup>
	<i>rpoB</i> Reverse	GCGGTACGGCGTTTTTCGATGAAC			

T<sub>M</sub>: temperature of melting; bp: base pairs.



TABLE II  
Description of the treatments of patients from the State of São Paulo who progressed to more drug resistant forms of tuberculosis

ID	Gender/ Age <sup>a</sup>	Year of MDR-TB diagnosis	Year of pre XDR-TB diagnosis	Year of XDR-TB diagnosis	Drug resistance <sup>b</sup>	Mutation-genetic target	Treatment regimens (year, drugs received and outcome)	Outcome/ Year	Co-morbidities or risk behaviors
05	M 62	-	2012	2015	RIF, INH, PZA, EMB, CM, OFX, LFX	Asp516Val- <i>rpoB</i> , Ser315Thr- <i>katG</i> Asp94Gly- <i>gyrA</i> A1401G- <i>rrs</i>	2010/2011: EMB, ETO, PZA, SM - Treatment failure 2011/2014: EMB, PZA, TRD, SM - Treatment failure 2014/2016: RIF, CFZ - Treatment failure 2017/2018: AM, ETO, CFZ - Treatment failure 2018: EMB, PZA, SM - Under treatment	Under treatment	None reported
18	F 41	-	2012	2013	RIF, INH, PZA, EMB, OFX, CM, AM, KN	Ser531Leu- <i>rpoB</i> , Ser315Thr- <i>katG</i> Asp94Gly- <i>gyrA</i> A1401G- <i>rrs</i>	2010/2012: PZA, EMB, SM, TRD - Treatment failure 2012/2014: PZA, EMB, ETO, TRD, AM - Treatment failure 2014/2016: RIF, CFZ - Treatment failure	Treatment failure 2016	None reported
36	M 29	2014	2016	-	RIF, INH, PZA, EMB, LFX	Ser531Leu- <i>rpoB</i> , Ser315Thr- <i>katG</i> Asp94Asn - <i>gyrA</i>	2014: RIF, INH, PZA, EMB - Treatment failure 2014/2015: PZA, EMB, SM, TDA - Treatment failure 2015/2016: PZA, EMB, TDA, AM - Treatment failure 2016: PZA, EMB, TDA, CFZ - Lost to follow-up 2017: PZA, EMB, CFZ - Lost to follow-up 2019: PZA, CFZ - Under treatment	Under treatment 2019	None reported
43	M 48	-	2014	2016	RIF, INH, PZA, SM, OFX, CM	Ser531Leu- <i>rpoB</i> , Ser315Thr- <i>katG</i> Asn538Asp <i>gyrB</i>	2013/2014: EMB, TRD - Treatment failure 2014/2107: RIF, INH, CFZ - Treatment failure 2017/2019: EMB, AM, CFZ - Cured	Cured 2019	None reported
50	M 66	2013	2015	-	RIF, INH, EMB, PZA, SM, OFX	Ser531Leu- <i>rpoB</i> , Ser315Thr- <i>katG</i> Asp94Gly <i>gyrA</i>	2013/2014: RIF, INH, PZA, EMB - Treatment failure 2014/2015: PZA, EMB, TRD - Treatment failure 2015/2017: OFX, TRD, AM, CFZ - Treatment failure 2017: PZA, EMB, TRD - Died	Died 2017	Hepatitis B and C
59	F 27	2014	2016	-	RIF, INH, EMB, PZA, OFX, LFX	Ser531Leu- <i>rpoB</i> , Ser315Thr- <i>katG</i> Asp94Gly <i>gyrA</i>	2014/2016: PZA, EMB, TRD, AM - Treatment failure 2016: ETO, CFZ - Died	Died 2016	None reported
61	M 50	2013	-	-	RIF, INH	Ser531Leu- <i>rpoB</i> , C-15T- <i>inhA</i>	2013: RIF, INH, PZA, EMB - Treatment failure 2013/2015: PZA, EMB, ST, TRD - Cured 2017/2019: PZA, EMB, ETO - Died	Died 2019	Alcohol abuse and smoking
62	M 58	2013 <sup>c</sup>	-	-	RIF, INH	Ser531Leu- <i>rpoB</i> , Met732Arg- <i>katG</i>	2013: PZA, EMB, TRD - Lost to follow-up 2015: PZA, EMB, TRD, AM - Lost to follow-up 2017: RIF, INH, PZA, EMB - Treatment failure	Treatment failure 2017	None reported
72	M 36	-	2013	2016	RIF, INH, PZA, EMB, LFX, KN	Ser531Leu- <i>rpoB</i> Arg463Leu, G1430del <i>katG</i> , A1401G <i>rrs</i> , Asp94Gly- <i>gyrA</i>	None reported	None reported	None reported
84	F 53	-	2012	2014	RIF, INH, CM, AM, KN, OFX	His526Tyr- <i>rpoB</i> , Ser315Thr- <i>katG</i> , A1401G <i>rrs</i> , Asp449Val <i>gyrB</i>	2014/2015: ETO, CFZ - Lost to follow-up 2016: PZA, ETO, CFZ - Lost to follow-up 2018: PZA, CFZ - Under treatment	Under treatment 2018	Diabetes mel- litus, smoking

a: age; b: DST results at the time of XDR-TB diagnosis; c: patient with an isolate in 2012 only INH-resistant; INH: isoniazid; RIF: rifampicin; SM: streptomycin; PZA: pyrazinamide; EMB: ethambutol; CM: capreomycin; KN: kanamicin; AM: amikacin; OFX: ofloxacin; LFX: levofloxacin; CFZ: clofazimine; TRD: terizidone; ETO: ethionamide. F: female; M: male.