

WHO Region and Country		Study Design	Study Setting	Cohort Type	Sample Size	Specimen Type	Phenotypic Method	PZase Activity Assay	Genotypic Method	Reference
Africa	Central African Republic	Retrospective	Lab	N/A	54	Sputum	N/A	No	PCR and DNA sequencing	Minime-Lingoupou 2010
	Congo	Retrospective	Lab	MDR	1	MTB clinical isolates	BACTEC 460 (100µg/ml)	Yes	PCR and DNA sequencing	Mestagh 1999
	Kenya	Prospective	Clinical	Any TB	286	MTB clinical isolates	BACTEC 960 (100µg/ml)	No	N/A	Ndung'u 2012
	Rwanda	Retrospective	Lab	MDR	1	MTB clinical isolates	BACTEC 460 (100µg/ml)	Yes	PCR and DNA sequencing	Mestagh 1999
	Tanzania	Retrospective	Lab	N/A	13	MTB clinical isolates	N/A	No	PCR and DNA sequencing	Mpagama 2013
	South Africa	N/S	N/S	HR-MDR	27	MTB clinical isolates	BACTEC 460 (100µg/ml)	Yes	PCR and DNA sequencing	Davies 2000
		Retrospective	Lab	N/A	9	MTB clinical isolates	N/A	No	Whole genome sequencing	Ioeiger 2009
Retrospective		Lab	Any TB	26	MTB clinical isolates	BACTEC 960 (100µg/ml)	No	Ion Torrent	Daum 2012	
Retrospective		Lab	N/A	21	MTB clinical isolates	BACTEC 460 (100-900µg/ml)	Yes	PCR and DNA sequencing	Bishop 2001	
Retrospective		Clinical	HR-MDR	174	MTB clinical isolates	BACTEC 960 (100µg/ml)	No	PCR and DNA sequencing	Louw 2006	
Retrospective	Lab	MDR; any TB	221	MTB clinical isolates	BACTEC 460 (100µg/ml)	Yes	PCR and DNA sequencing	Mphahlele 2008		
Americas	Brazil	Retrospective	Lab	N/A	40	MTB clinical isolates	Indirect proportion method	Yes	PCR and DNA sequencing	Rodrigues 2005
		Retrospective	Lab	N/A	36	MTB clinical isolates	Proportion method	Yes	PCR and DNA sequencing	Barco 2006
		Prospective	Clinical	HR-MDR	23	Sputum	BACTEC 460 (N/S)	Yes	PCR and DNA sequencing	Clemente 2008
		Prospective	Clinical	Any TB	71	MTB clinical isolates	7H9 agar	Yes	N/A	Ribeiro 2012
		Retrospective	Clinical	Any TB	97	MTB clinical isolates	Proportion method	Yes	PCR and DNA sequencing	Bhuju 2013
		Prospective	Lab	Any TB	50	Sputum	BACTEC 460 (100µg/ml)	No	N/A	Barreto 2002
		Retrospective	Lab	N/A	32	MTB clinical isolates	N/A	Yes	PCR and DNA sequencing	Ghiraldi 2011
	Canada	Retrospective	Lab	Any TB	28	MTB clinical isolates	Middlebrook 7H11	Yes	PCR and DNA sequencing	Hirano 1998
		Retrospective	Lab	N/A	28	MTB clinical isolates	BACTEC 460 (100-300µg/ml)	Yes	PCR and DNA sequencing	Cheng 2000
		Prospective	Lab	Any TB	743	MTB clinical isolates	BACTEC 460/960 (100µg/ml)	Yes	PCR and DNA sequencing	Chedore 2010
		Retrospective	Lab	Any TB	141	MTB clinical isolates	BACTEC 460 (100µg/ml)	No	PCR and DNA sequencing	Alexander 2012
		Retrospective	Lab	MDR	1	MTB clinical isolates	BACTEC 460 (100µg/ml)	Yes	PCR and DNA sequencing	Mestagh 1999
		Retrospective	Lab	N/A	354	MTB clinical isolates	BACTEC 460 (100µg/ml)	Yes	PCR and RFLP	Nguyen 2003
	Cuba	Retrospective	Lab	Any TB	102	MTB clinical isolates	Nitrate reductase assay	Yes	PCR and DNA sequencing	Mirabal 2010
	Mexico	Prospective	Lab	HR-MDR	127	Sputum	BACTEC 960 (100µg/ml)	No	PCR and DNA sequencing	Cuevas-Cordoba 2013
		Prospective	Lab	Any TB	460	MTB clinical isolates	BACTEC 460 (N/S)	No	N/A	Granich 2000
	Peru	Prospective	Clinical	HR-MDR	29	MTB clinical isolates	N/A	Yes	PCR and DNA sequencing	Escalante 1998
		Retrospective	Lab	Any TB	185	MTB clinical isolates	BACTEC 460 (100µg/ml)	Yes	PCR and DNA sequencing	Sheen 2009
		Prospective	Clinical	MDR	150	MTB clinical isolates	BACTEC 460 (100µg/ml)	No	N/A	Becerra 2000
Retrospective		Clinical	HR-MDR	122	MTB clinical isolates	N/A	Yes	N/A	Saravia 2005	
United States	Retrospective	Lab	Any TB	16	MTB clinical isolates	BACTEC 460 (N/S)	No	PCR and DNA sequencing	Sachais 1998	
	Retrospective	Lab	MDR; Any TB	48	MTB clinical isolates	BACTEC 460 (100µg/ml)	No	N/A	LaBombardi 2002	
	Retrospective	Lab	N/A	19	MTB clinical isolates	BACTEC 460 (100-900µg/ml)	Yes	PCR and DNA sequencing	Cheng 2000	
	Retrospective	Lab	N/A	60	MTB clinical isolates	Middlebrook 7H11	Yes	PCR and DNA sequencing	Morlock 2000	
	Retrospective	Lab	N/A	1436	MTB clinical isolates	BACTEC 460 (100µg/ml)	No	PCR and DNA sequencing	Hannan 2001	
	Retrospective	Lab	N/A	33	MTB clinical isolates	BACTEC 460 (100µg/ml)	Yes	PCR and DNA sequencing	Denkin 2005	
	Retrospective	Lab	Any TB	54	MTB clinical isolates	BACTEC 460/960 (100µg/ml)	No	N/A	Fredriks 2006	
	Retrospective	Lab	N/A	29	MTB clinical isolates		No	PCR and DNA sequencing	Dormandy 2007	

		Prospective	Lab	Any TB	27	MTB clinical isolates	BACTEC 460 (6.25-50µg/ml) BACTEC 960 (100µg/ml)	No	N/A	Duque 2013
East Med.	Iran	Prospective	Clinical	N/A	49	MTB clinical isolates	Middlebrook 7H9	Yes	PCR and DNA sequencing	Doustdar 2009
	Yemen	Retrospective	Lab	Any TB	31	MTB clinical isolates	Middlebrook 7H11	Yes	PCR and DNA sequencing	Hirano 1998
	Pakistan	Prospective	Clinical	MDR	30	MTB clinical isolates	BACTEC 960 (50-100µg/ml)	No	N/A	Khurram 2012
	Saudi Arabia	Prospective	Lab	Any TB	101	MTB clinical isolates	BACTEC (N/S)	No	N/A	Khan 2001
Europe	Abkhazia	Prospective	Clinical	MDR	37	Sputum	BACTEC 960 (100µg/ml)	No	N/A	Pardini 2007
	Azerbaijan	Retrospective	Lab	MDR	5	MTB clinical isolates	BACTEC 460 (100µg/ml)	Yes	PCR and DNA sequencing	Mestagh 1999
	Belgium	Retrospective	Lab	N/A	138	MTB clinical isolates	BACTEC 960 (100µg/ml)	No	PCR and DNA sequencing	Stoffels 2012
		Retrospective	Lab	MDR	2	MTB clinical isolates	BACTEC 460 (100µg/ml)	Yes	PCR and DNA sequencing	Mestagh 1999
	France	Retrospective	Lab	Any TB	35	MTB clinical isolates	Middlebrook 7H10	Yes	PCR and DNA sequencing	Lemaitre 1999
	Germany	Retrospective	Lab	N/A	9	MTB clinical isolates	BACTEC 460 (100µg/ml)	No	PCR and DNA sequencing	Napiorkowska 2014
	Greece	Prospective	Lab	Any TB	150	MTB clinical isolates	BACTEC 460/960 (100µg/ml)	No	N/A	Kontos 2003
	Italy	Retrospective	Lab	Any TB	337	MTB clinical isolates	BACTEC 460 (N/S)	No	N/A	Nutuni 1998
		Retrospective	Lab	MDR; HR-MDR	46	MTB clinical isolates	BACTEC 460 (100µg/ml)	No	N/A	Fattorini 1999
		Retrospective	Lab	Any TB	100	MTB clinical isolates	BACTEC 460/960 (100µg/ml)	No	N/A	Scarpato 2004
		Retrospective N/S	Lab N/S	MDR; Any TB	201	MTB clinical isolates	BACTEC 960 (100µg/ml)	No	PCR and DNA sequencing	Piersimoni 2013
	Latvia	Retrospective	Clinical	N/A	28	MTB clinical isolates	BACTEC 460 (N/S)	No	PCR and DNA sequencing	Tracevska 2004
	Netherlands	Retrospective	Lab	Any TB	1831	MTB clinical isolates	BACTEC 960 (100µg/ml)	No	PCR and DNA sequencing	Simons 2012
	Poland	Retrospective	Lab	Any TB	33	MTB clinical isolates	BACTEC 960 (100µg/ml)	Yes	PCR and DNA sequencing	Sekiguchi 2007
		Retrospective	Lab	Any TB	1909	MTB clinical isolates	BACTEC 460 (100µg/ml)	No	N/A	Napiorkowska 2010
		Retrospective	Lab	N/A	72	MTB clinical isolates	BACTEC 460 (100µg/ml)	No	PCR and DNA sequencing	Napiorkowska 2014
	Portugal	Retrospective	Clinical	N/A	55	MTB clinical isolates	BACTEC 960 (100µg/ml)	Yes	PCR and DNA sequencing	Portugal 2004
		Retrospective	Lab	MDR	58	MTB clinical isolates	BACTEC 960 (100µg/ml)	No	PCR and DNA sequencing	Perdigao 2008
	Russia	Prospective	Clinical	N/A	44	MTB clinical isolates	BACTEC 460 (100µg/ml)	Yes	PCR and DNA sequencing	Marttila 1999
		Prospective	Prison	N/A	75	MTB clinical isolates	N/A	No	PCR and DNA sequencing	Shemyakin 2004
Prospective		Clinical	N/A	21	MTB clinical isolates	N/A	No	PCR and DNA sequencing	Zhdanova 2013	
Retrospective		Lab	MDR	3	MTB clinical isolates	BACTEC 460 (100µg/ml)	Yes	PCR and DNA sequencing	Mestagh 1999	
Spain	Retrospective	Lab	N/A	50	MTB clinical isolates	BACTEC 460 (100µg/ml)	No	PCR and DNA sequencing	Aragon 2007	
	Retrospective	Clinical	Any TB	57	MTB clinical isolates	BACTEC 460 (100µg/ml)	No	PCR and DNA sequencing	Espasa 2012	
Scotland	Retrospective	Lab	Any TB	6	MTB clinical isolates	BACTEC 460 (100µg/ml)	Yes	PCR and DNA sequencing	Mestagh 1999	
Sweden	Retrospective	Lab	N/A	69	MTB clinical isolates	BACTEC 460 (100µg/ml)	No	PCR and DNA sequencing	Jureen 2008	
	Prospective	Lab	N/A	52	MTB clinical isolates	BACTEC 960 (100µg/ml)	No	PCR and DNA sequencing	Hoffner 2013	
	Retrospective	Clinical	N/A	46	MTB clinical isolates	BACTEC 460/960 (100µg/ml)	Yes	PCR and DNA sequencing	Werngren 2012	
Turkey	Retrospective	Lab	N/A	10	MTB clinical isolates	BACTEC 460 (100µg/ml)	Yes	PCR and DNA sequencing	Brown 2000	
	Retrospective	Lab	N/A	12	MTB clinical isolates	BACTEC 460 (N/S)	Yes	PCR and DNA sequencing	Yuksel 2009	
United Kingdom	Retrospective	Lab	Any TB	20899	MTB clinical isolates	BACTEC 460 (100µg/ml)	No	N/A	Djuretic 2002	
South East Asia	Bangladesh	Retrospective	Lab	MDR	4	MTB clinical isolates	BACTEC 460 (100µg/ml)	Yes	PCR and DNA sequencing	Mestagh 1999
	India	Retrospective	Lab	Any TB	10	MTB clinical isolates	Middlebrook 7H11	Yes	PCR and DNA sequencing	Hirano 1998
		Prospective	Clinical	N/A	65	Sputum	N/A	No	PCR and DNA sequencing	Stavrum 2009
		Retrospective	Clinical	N/A	77	MTB clinical isolates	N/S	No	PCR and DNA sequencing	Harris 2000
	Prospective	Clinical	HR-MDR	50	Sputum	Proportion method	Yes	PCR and DNA sequencing	Muthaiah 2010	

		N/S Retrospective Prospective Retrospective Retrospective	Clinical Lab Clinical Lab Lab	Any TB N/A N/A Any TB Any TB	130 107 63 136 186	MTB clinical isolates MTB clinical isolates MTB clinical isolates MTB clinical isolates MTB clinical isolates	BACTEC 960 (100µg/ml) Proportion method BACTEC 960 (100µg/ml) BACTEC 960 (100µg/ml) BACTEC 960 (100µg/ml)	Yes Yes Yes Yes No	N/A N/A PCR and DNA sequencing N/A N/A	Krishnamurthy 2004 Singh 2007 Shenai 2009 Sharma 2010 Arora 2013
	East Timor	Prospective	Clinical	MDR; HR-MDR	23	MTB clinical isolates	N/A	Yes	N/A	Kelly 2004
	Indonesia	Retrospective Prospective	Lab Clinical	Any TB Any TB	8 103	MTB clinical isolates MTB clinical isolates	Middlebrook 7H11 N/A	Yes Yes	PCR and DNA sequencing N/A	Hirano 1998 Kelly 2006
	Myanmar	Retrospective	Lab	Any TB	16	MTB clinical isolates	Middlebrook 7H11	Yes	PCR and DNA sequencing	Hirano 1998
	Thailand	Retrospective Prospective Retrospective Retrospective Retrospective	Lab Lab Lab Lab Lab	Any TB Any TB N/A N/A MDR; Any TB	54 30 42 98 150	MTB clinical isolates MTB clinical isolates MTB clinical isolates MTB clinical isolates MTB clinical isolates	Middlebrook 7H11 BACTEC 960 (100µg/ml) BACTEC 960 (100µg/ml) BACTEC 960 (100µg/ml) BACTEC 960 (100µg/ml)	Yes No No No Yes	PCR and DNA sequencing N/A PCR and DNA sequencing PCR and DNA sequencing PCR and DNA sequencing	Hirano 1998 Duque 2013 Watcharasamphankul 2013 Pholwat 2014 Jonmalung 2010
Western Pacific	Cambodia	Retrospective	Lab	N/A	166	MTB clinical isolates	N/A	No	PCR and DNA sequencing	Pierre-Audigier 2012
	China	Retrospective Retrospective Prospective Prospective Prospective Retrospective Prospective	Lab Lab Clinical Clinical Clinical Clinical Clinical	N/A N/A Any TB N/A Any TB Any TB MDR; Any TB	64 47 51 53 432 132 218	MTB clinical isolates MTB clinical isolates MTB clinical isolates Sputum MTB clinical isolates MTB clinical isolates MTB clinical isolates	BACTEC 460 (100µg/ml) Proportion method BACTEC 960 (100µg/ml) N/A BACTEC 960 (100µg/ml) Proportion method BACTEC 960 (100µg/ml)	No Yes Yes Yes Yes Yes No	PCR and DNA sequencing PCR and DNA sequencing PCR and DNA sequencing Long fragment qPCR PCR and DNA sequencing PCR and DNA sequencing PCR and DNA sequencing	Hou 2000 Zhang 2009 Zhou 2011 Li 2014 Cui 2013 Huang 2013 Tan 2013
	Malaysia	Retrospective	Lab	Any TB	1	MTB clinical isolates	Middlebrook 7H11	Yes	PCR and DNA sequencing	Hirano 1998
	New Zealand	Prospective	Lab	N/A	33	MTB clinical isolates	BACTEC 460/960 (100µg/ml)	Yes	PCR and DNA sequencing	Pandey 2009
	Philippines	Retrospective	Lab	Any TB	12	MTB clinical isolates	Middlebrook 7H11	Yes	PCR and DNA sequencing	Hirano 1998
	Papua New Guinea	Retrospective	Clinical	MDR	39	MTB clinical isolates	BACTEC 460/960 (100µg/ml)	No	N/A	Simpson 2011
	Korea	Retrospective Retrospective Retrospective Retrospective Retrospective Prospective Retrospective Retrospective	Lab Lab Lab Clinical Lab Clinical Clinical Lab	Any TB N/A N/A HR-MDR N/A N/A N/A N/A	8 10 95 93 80 102 23 192	MTB clinical isolates MTB clinical isolates MTB clinical isolates Sputum MTB clinical isolates MTB clinical isolates Extrapulmonary MTB MTB clinical isolates	Middlebrook 7H11 Proportion method N/A N/A N/A Proportion method N/A Absolute concentration method	Yes Yes Yes Yes Yes Yes No No	PCR and DNA sequencing PCR and DNA sequencing PCR and DNA sequencing PCR and DNA sequencing PCR and DNA sequencing PCR and DNA sequencing PCR and DNA sequencing PCR and DNA sequencing	Hirano 1998 Cheng 2000 Lee 2001 Choi 2010 Yoon 2012 Kim 2012 Lee 2012 Jnawali 2013
	Taiwan	Retrospective Retrospective Prospective Prospective	Clinical Clinical Clinical Lab	MDR; Any TB Any TB MDR MDR; Any TB	76 611 66 56	MTB clinical isolates MTB clinical isolates MTB clinical isolates MTB clinical isolates	BACTEC 960 (100-300µg/ml) N/A BACTEC 960 (100µg/ml) BACTEC 960 (100µg/ml)	Yes Yes Yes No	PCR and DNA sequencing N/A PCR and DNA sequencing N/A	Huang 2003 Su 2008 Chiou 2011 Huang 2013
	Vietnam	Retrospective	Clinical	Any TB	339	MTB clinical isolates	N/A	Yes	Line probe	Van Hung 2013