

31	8	2016	S	R	R	R	S	S	S	S
32	10	2016	R	R	S	R	S	S	S	R
33	12	2016	R	R	R	S	S	S	S	R
34	13	2016	R	R	R	R	S	S	S	R
35	15	2016	R	R	R	R	S	S	S	R
36	16	2016	R	R	R	R	S	S	S	R
37	17	2016	R	R	R	R	S	S	S	R
38	18	2016	R	R	R	R	S	S	S	R
39	19	2016	R	R	R	S	S	S	S	S
40	24	2016	R	R	R	R	S	S	S	R
41	25	2016	R	R	R	R	S	S	S	R
42	28	2016	R	R	R	R	S	S	S	R
43	30	2016	R	R	R	R	S	S	S	R
44	31	2016	R	R	R	R	S	S	S	R
45	32	2016	R	R	R	R	S	S	S	R
46	33	2016	R	R	R	R	S	S	S	R
47	40	2016	R	R	R	R	S	S	S	R
48	41	2016	R	R	R	R	S	S	S	S
49	42	2016	R	R	R	R	S	S	S	R
50	50	2016	R	R	R	S	S	S	S	R
51	55	2016	R	R	R	S	S	S	S	S
52	57	2016	S	R	R	R	S	S	S	S
53	64	2016	R	R	R	R	S	S	S	R
54	120	2016	R	R	R	S	S	S	S	S
55	220	2016	R	R	R	S	S	S	S	S
56	320	2016	ND	R	R	ND	S	S	S	R
57	520	2016	R	R	R	S	S	S	S	S
58	901	2016	S	S	S	S	S	S	S	S

DST of Strains from Lucknow

S. No	Strain ID	Year	FLD Resistance Profile				SLD Resistance Profile			
			S	H	R	E	KAN	AMK	CAP	OFX
1	915	2012	R	R	R	R	R	R	R	R
2	43RN	2013	R	R	R	R	R	S	S	S
3	47	2013	S	S	S	R	R	S	R	S
4	2009	2012	R	R	R	S	R	R	R	R
5	40RN	2013	S	S	R	S	R	S	S	S

6	66	2013	S	S	S	R	R	S	S	S
8	233	2013	S	S	R	R	R	S	S	R
8	367	2013	R	R	R	R	R	R	R	R
9	403	2013	R	R	R	R	R	S	R	R
10	416	2013	R	R	R	R	R	S	R	S
11	451	2013	R	R	R	R	R	S	R	R
12	456	2013	R	S	S	R	R	S	S	S
13	509	2013	R	R	R	R	R	S	S	R
14	658	2013	R	R	R	S	R	S	R	S
15	665	2013	S	R	R	S	R	S	S	S
16	3507	2013	R	R	R	R	R	R	R	R
17	633	2013	R	R	R	R	R	R	R	R
18	53	2013	R	S	S	S	R	S	R	S
19	3506	2013	S	S	R	S	R	S	R	S
20	65DP	2012	R	R	R	S	R	S	R	S
21	702	2013	R	S	R	S	R	S	S	R
22	34RN	2013	S	R	R	R	R	S	S	S
23	103RN	2013	R	R	R	R	R	R	R	R
24	3470	2013	R	R	R	R	R	S	S	R
25	148RN	2013	S	R	R	R	R	S	R	R
26	446	2013	S	R	R	S	R	R	R	ND
27	1031	2012	S	S	R	S	R	S	S	R
28	2047	2012	R	R	R	S	R	S	S	R
29	131RN	2012	S	R	S	S	R	S	S	S
30	747	2016	ND	R	R	ND	R	ND	ND	R
31	1481	2016	ND	R	R	ND	R	ND	ND	R
32	1809	2016	ND	R	R	ND	R	ND	ND	R
33	1982	2016	ND	R	R	ND	R	ND	ND	R
34	2321	2016	ND	R	R	ND	R	ND	ND	R
35	13RN	2013	S	S	R	S	S	S	S	S
36	28RN	2013	S	R	R	S	S	S	S	S
37	44RN	2013	R	R	R	R	S	S	S	S
38	125	2013	S	S	S	S	S	S	S	S
39	482	2013	S	R	R	S	S	S	S	S
40	641	2013	S	R	S	R	S	S	S	S
41	653	2013	R	R	R	R	S	S	S	S
42	105	2013	S	S	S	S	S	S	S	S
43	3509	2013	S	S	S	R	S	S	R	S
44	81	2013	S	S	S	R	S	S	S	S

45	3532	2013	R	R	R	R	S	S	S	S
46	335	2013	R	R	R	R	S	S	S	R
47	417	2013	R	R	R	S	S	S	S	S
48	3480	2013	S	R	R	R	S	S	S	R
49	706	2013	R	R	R	S	S	R	S	S
50	337	2012	R	R	R	R	S	S	S	S
51	2099	2012	S	R	S	R	S	S	S	R
52	2427	2012	R	R	S	S	S	S	S	R
53	891	2012	R	R	R	R	S	S	S	R
54	358RN	2013	R	R	R	S	S	S	S	R
55	3118	2013	R	R	R	R	S	S	R	R
56	3334	2013	R	R	R	R	S	S	S	R
57	3514	2013	R	R	R	R	S	S	S	R
58	3516	2013	S	R	R	S	S	S	S	R
59	3537	2013	R	R	R	R	S	S	S	R
60	10	2013	R	R	R	R	S	S	R	R
61	83	2013	R	R	R	R	S	S	S	R
62	164	2013	R	R	R	R	S	R	S	S
63	166	2013	R	R	R	R	S	S	R	R
64	2703	2016	ND	R	R	ND	S	S	S	S
65	2705	2016	ND	R	R	ND	S	S	S	S
66	2706	2016	ND	R	R	ND	S	S	S	S
67	3900	2016	ND	R	R	ND	S	ND	ND	R
68	4198	2016	ND	R	R	ND	S	ND	ND	R

S used as FLD: Streptomycin; H: Isoniazid; R used as FLD: Rifampicin; E: Ethambutol; Kan: Kanamycin; AMK: Amikacin; CAP: Capreomycin; OFX: Ofloxacin; ND: Drug susceptibility testing could not be determined; R: Resistant; S: Sensitive

Supplementary Table 2: Primers used for the detection of mutations in the clinical strains

Target region	Primer sequence	Amplicon size (bp)
<i>eis</i> + promoter	FP: 5' CGA ATT CAC GTC GGT GCC GGA GCC GTC 3' RP: 5' CAAGCTTTCAGAACTCGAACGCGGT 3'	1400
<i>rrs2</i> (1400bp region)	FP2:5' GTCAGCTCGTGTCGTGAGATGTTGG 3' RP2:5'TGGCCAACTTTGTTGTCATGCACCCGG3'	531
<i>whiB7</i> + 5'UTR	FP: 5' GCTGCAGCTGGTTCGCGGTCGGACC 3' RP: 5' GGT GGG CGC GAT CCT ATG CCA GC 3'	872
<i>gyrA</i> QRDR	FP1: 5' GCAGCTACATCGACTATGCGATGAG 3' RP1: 5' AGC CGG GCT TCG GTG TAC CTC A 3'	325
<i>gyrB</i> QRDR	FP:5' CGTAAGGCACGAGAGTTGGTGCG 3' RP: 5' TCAGCACGATCTTGTGGTAGCGCAG 3'	328
<i>tlyA</i>	FP1 5' GGA CCG TCT CTG GCC GAA CTC G 3' RP1 5' ACG CGC CGT GCG GTC TCG GTG 3'	941

Supplementary Table 3: Distribution of absolute numbers of major lineages observed among the respective drug resistant groups in Mumbai and Lucknow

Spoligotype	Number of OFX ^R isolates carrying <i>gyrA</i> and <i>gyrB</i> mutations		Number of KAN ^R isolates carrying <i>eis</i> , <i>rrs</i> , and <i>whiB7</i> mutations		Number of CAP ^R isolates carrying <i>rrs</i> and <i>tlyA</i> mutations	
	Mumbai (n=40)	Lucknow (n=25)	Mumbai (n=25)	Lucknow (n=16)	Mumbai (n=15)	Lucknow (n=9)
EAI5	15	2	12	0	7	0
Manu1	1	0	0	0	0	0
Manu2	3	4	1	1	1	2
Manu_ancestor	1	0	1	0	0	0
Beijing	5	2	0	2	0	0
T1	1	3	0	1	0	1
EAI3-IND	1	0	0	1	0	0
CAS1-Delhi	1	2	0	2	0	1
Orphan	12	12	11	9	7	5

Supplementary Table 4: List of mutations in Kan^R and Kan^S strains

Kan^R Strains of Mumbai

S. No.	Strain ID	<i>rrs</i>	<i>eis</i> + promoter	<i>whiB7</i> + 5'UTR
1	235	A1401G, C513T	none	<u>G59A</u>
2	148	none	none	None
3	403467	A1401G	none	None
4	189	none	none	<u>A43T, C44A, C47A, G48T, G59A</u>
5	321345	none	none	None
6	268	none	none	<u>G59A, T152G</u>
7	401421	A1401G	none	None
8	527153	A1401G	none	<u>A43T, C44A, C47A, G48T, G59A</u>
9	526973	A1401G	none	None
10	521942	A1401G	none	<u>A43T, C44A, C47A, G48T, G59A, T152G</u>
11	528052	none	none	<u>A43T, C44A, C47A, G48T, G59A, T152G</u>
12	528597	A1401G	none	None
13	529238	A1401G	none	<u>A43T, C44A, C47A, G48T, G59A, T152G</u>
14	14	none	none	<u>C253T</u>
15	20	none	G-10C	<u>C253T</u>
16	22	none	C-14T	<u>G59A</u>
17	26	none	none	<u>A43T, C44A, C47A, G48T, G59A</u>
18	29	C1402T	none	<u>G59A</u>
19	47	none	G487A	<u>C253T</u>
20	65	A1401G	none	<u>G59A</u>
21	67	A1401G	none	None
22	69	A1401G	none	None
23	72	none	C-14T	None
24	420	A1401G	none	None
25	101R	A1401G	none	<u>G59A</u>
26	102R	A1401G	none	<u>G59A</u>
27	103R	none	none	<u>A43T, C44A, C47A, G48T, G59A</u>
28	104R	A1401G	G487A	<u>G59A</u>
29	105R	none	none	<u>A43T, C44A, C47A, G48T, G59A</u>

Kan^R Strains of Lucknow

S. No.	Strain ID	<i>rrs</i>	<i>eis</i> + promoter	<i>whiB7</i> + 5'UTR
1	915	G1484T	none	none
2	43RN	none	none	none
3	47	none	none	none
4	2009	A1401G	none	A264G
5	40RN	none	none	none
6	66	none	none	none
7	233	none	none	none
8	367	A1401G	none	none
9	403	none	none	none
10	416	G1484T	none	none
11	451	none	C-12T	none
12	456	none	none	+G127
13	509	none	none	ΔG177, +CG244
14	658	none	none	none
15	665	none	T204G	none
16	3507	G1484T	none	none
17	633	none	none	none
18	53	C517T	none	none
19	3506	none	none	none
20	65DP	none	none	none
21	702	none	C-14T	none
22	34RN	none	none	none
23	103RN	none	none	none
24	3470	G1484T	none	none
25	148RN	G1484T	G-37T	none
26	446	none	none	none
27	1031	none	none	none
28	2047	A1401G	none	none
29	131RN	none	none	none
30	747	none	none	G59A, C253T
31	1481	A1401G	G487A	G59A, C253T
32	1809	T1322A	none	none
33	1982	A1401G, A514C	none	G59A, A42C, C253T
34	2321	A1401G, A514C	none	<u>T270G</u>

Mutations marked in Red: *whiB7* 5'-UTR mutations
Mutations marked in Blue: *whiB7* gene mutations
Novel SNPs are underlined

Kan^S strains of Mumbai

S. No.	Strain ID	<i>rrs</i>	<i>eis</i> + promoter	<i>whiB7</i> + 5'UTR
1	2	none	none	none
2	8	none	none	none
3	10	none	none	<u>G59A, C253T</u>
4	12	none	none	<u>G59A, C253T</u>
5	13	A908C	none	<u>G59A, C253T</u>
6	15	none	none	<u>C253T</u>
7	16	none	G487A	<u>C253T</u>
8	17	none	C-12T	<u>C253T</u>
9	18	none	none	<u>C253T</u>
10	19	none	none	<u>C253T</u>
11	24	none	none	<u>C253T</u>
12	25	none	G487A	none
13	28	none	none	<u>C253T</u>
14	30	none	none	<u>C253T</u>
15	31	none	none	<u>G59A, C253T</u>
16	32	none	none	<u>G59A, C253T</u>
17	33	none	none	<u>ΔG177</u>
18	40	none	none	<u>C253T</u>
19	41	none	G487A	none
20	42	none	G487A	<u>C253T</u>
21	50	none	none	<u>C253T</u>
22	55	none	none	<u>C253T</u>
23	57	none	none	<u>C253T</u>
24	64	none	none	<u>C253T</u>
25	120	none	none	<u>G59A, C253T</u>
26	220	none	none	none
27	320	none	none	none
28	520	C513T	none	<u>G59A, C253T</u>
29	901	none	none	<u>G59A</u>

Kan^S strains of Lucknow

S. No.	Strain ID	<i>rrs</i>	<i>eis</i> + promoter	<i>whiB7</i> + 5'UTR
1	13RN	none	none	none
2	28RN	none	none	none
3	44RN	none	none	none
4	125	none	none	none
5	482	none	none	none
6	641	none	none	none
7	653	none	none	none
8	105	none	none	none
9	3509	none	none	none
10	81	none	none	none
11	3532	none	none	none
12	335	A514C	none	none
13	417	none	none	none
14	3480	A1401G	none	none
15	706	A514C	none	none
16	337	none	none	none
17	2099	none	none	none
18	2427	none	none	none
19	891	none	none	none
20	358RN	none	none	none
21	3118	none	none	none
22	3334	none	none	none
23	3514	none	none	none
24	3516	none	none	none
25	3537	none	none	none
26	10	none	none	none
27	83	none	none	none
28	164	none	none	none
29	166	none	none	none
30	2703	none	none	<u>C253T</u>
31	2705	none	none	none
32	2706	none	none	none
33	3900	none	none	none
34	4198	none	G487A	none

Mutations marked in Red: *whiB7* 5'-UTR mutations
Mutations marked in Blue: *whiB7* gene mutations
Novel SNPs are underlined

Supplementary Table 5: List of mutations in CAP^R, CAP^S and CAPND strains

CAP^R strains of Mumbai

S. No.	Strain ID	<i>tlyA</i>	<i>rrs</i>
1	235	A33G	A1401G, C513T
2	148	none	none
3	403467	A33G	A1401G
4	189	none	none
5	321345	A33G	none
6	268	none	none
7	401421	none	A1401G
8	527153	A33G	A1401G
9	526973	none	A1401G
10	521942	A33G	A1401G
11	529238	A33G	A1401G
12	14	A33G	none
13	29	none	C1402T
14	65	A33G	A1401G
15	67	A33G	A1401G
16	69	A33G	A1401G
17	72	A33G	none
18	420	A33G	A1401G
19	101R	A33G	A1401G
20	102R	A33G	A1401G
21	103R	A33G	none
22	104R	none	A1401G
23	105R	none	none

CAP^R strains of Lucknow

S. No.	Strain ID	<i>tlyA</i>	<i>rrs</i>
1	915	A33G	G1484T
2	47	A33G	none
3	2009	none	A1401G
4	367	none	A1401G
5	403	none	none
6	416	none	G1484T
7	451	A33G, C64T	none
8	658	A33G	none
9	3507	none	G1484T
10	633	none	none
11	53	A33G	C517T
12	3506	none	none
13	65DP	A33G, C64T	none
14	103RN	none	none
15	148RN	none	G1484T
16	446	none	none
17	3509	A33G	none
18	3118	A33G, <u>+CG200</u>	none
19	10	A33G	none
20	166	A33G	none

Novel SNPs are underlined

CAP^S strains of Mumbai

S. No.	Strain ID	<i>tlyA</i>	<i>rrs</i>
1	528052	A33G	none
2	528597	A33G	A1401G
3	20	A33G	none
4	22	A33G	none
5	26	A33G	none
6	47	A33G	none
7	2	A33G	none
8	8	A33G	none
9	10	A33G	none
10	12	A33G	none
11	13	A33G	A908C
12	15	A33G	none
13	16	A33G	none
14	17	A33G	none
15	18	A33G	none
16	19	A33G	none
17	24	A33G, <u>G165A</u>	none
18	25	A33G	none
19	28	A33G	none
20	30	A33G	none
21	31	A33G	none
22	32	A33G	none
23	33	A33G	none
24	40	A33G	none
25	41	A33G	none
26	42	A33G	none
27	50	A33G	none
28	55	A33G	none
29	57	A33G, <u>G165A</u>	none
30	64	A33G	none
31	120	A33G	none
32	220	A33G	none
33	320	A33G	none
34	520	A33G	C513T
35	901	A33G	none

Novel SNPs are underlined

CAP^S strains of Lucknow

S. No.	Strain ID	<i>tlyA</i>	<i>rrs</i>
1	43RN	A33G	none
2	40RN	A33G	none
3	66	A33G	none
4	233	A33G	none
5	456	none	none
6	509	none	none
7	665	none	none
8	702	A33G	none
9	34RN	none	none
10	3470	none	G1484T
11	1031	none	none
12	2047	none	A1401G
13	131RN	none	none
14	13RN	A33G	none
15	28RN	A33G	none
16	44RN	A33G	none
17	125	A33G	none
18	482	A33G	none
19	641	A33G	none
20	653	A33G	none
21	105	A33G	none
22	81	A33G	none
23	3532	A33G	none
24	335	A33G	A514C
25	417	A33G	none
26	3480	A33G	A1401G
27	706	A33G, <u>C415G</u>	A514C
28	337	A33G	none
29	2099	A33G	none
30	2427	A33G	none
31	891	A33G	none
32	358RN	A33G	none
33	3334	A33G	none
34	3514	A33G	none
35	3516	A33G	none
36	3537	A33G	none
37	83	A33G	none
38	164	A33G	none
39	2703	A33G	none
40	2705	A33G	none
41	2706	A33G	none

CAPND strains of Lucknow

S. No.	Strain ID	tlyA	<i>rrs</i>
1	747	A33G, + <u>G543</u>	none
2	1481	A33G	A1401G
3	1809	A33G	T1322A
4	1982	A33G	A1401G, A514C
5	2321	A33G	A1401G, A514C
6	3900	A33G	none
7	4198	A33G	none

Novel SNPs are underlined

Supplementary Table 6: List of mutations in OFX^R, OFX^S and OFXND strains

OFX ^R strains of Mumbai			
S. No.	Strain ID	<i>gyrA</i>	<i>gyrB</i>
1	235	Ala90Val, Ser95Thr	none
2	148	Ala90Val, Ser95Thr	none
3	403467	Asp94Gly, Ser95Thr	none
4	189	S95T	none
5	321345	Ala90Val, Ser95Thr	none
6	268	Ala90Val	none
7	401421	Ala90Val, Ser95Thr	none
8	527153	Ala90Val, Ser95Thr	none
9	526973	Ala90Val, Ser95Thr	Ala504Val
10	521942	Gly88Cys, Ser95Thr	none
11	528052	Asp94Gly, Ser95Thr	none
12	528597	Ala90Val, Ser95Thr	none
13	529238	Asp94Gly, Ser95Thr	none
14	14	Asp94Gly, Ser95Thr	none
15	20	Asp94Ala	none
16	22	Asp94Ala, Ser95Thr	+G1359
17	26	Asp94Gly, Ser95Thr	none
18	29	Asp94Ala, Ser95Thr	none
19	47	Asp94Ala, Ser95Thr	none
20	65	Asp94Gly, Ser95Thr	none
21	67	Ala90Val, Ser95Thr	none
22	69	Asp94Gly, Ser95Thr	none
23	72	Asp94Gly, Ser95Thr	none
24	420	Asp94Gly, Ser95Thr	none
25	101R	S95T	none
26	102R	Ala90Val, Ser95Thr	+A1429
27	103R	Asp94Gly, Ser95Thr	Glu501Asp
28	104R	S95T	none
29	10	Ser95Thr, Ala90Val	none
30	12	Ser95Thr, Asp94Gly	none
31	13	Asp94His	none
32	15	Ser95Thr, Asp94Gly	none
33	16	Ser95Thr, Asp94Ala	none
34	17	Ser95Thr, Asp94Gly	none
35	18	Ser95Thr, Asp94Gly	none
36	24	Ser95Thr, Asp94Tyr	none
37	25	Ser95Thr, Ser91Pro	Arg446Leu
38	28	Ser95Thr, Asp94Ala	none
39	30	S95T	none
40	31	Ser95Thr, Asp94Gly	none
41	32	Ser95Thr, Asp94Gly	none
42	33	Ser95Thr, Asp94Gly	Asn499Thr
43	40	Ser95Thr, Asp94Gly	none
44	42	Ser95Thr, Asp94Gly	none
45	50	S95T	none
46	64	S95T	none
47	320	S95T	none

OFX ^R strains of Lucknow			
S. No.	Strain ID	<i>gyrA</i>	<i>gyrB</i>
1	915	Ser95Thr	none
2	2009	Ser95Thr, Asp94Asn	none
3	233	Ser95Thr	none
4	367	Ser91Pro, Ser95Thr	none
5	403	none	none
6	451	Asp94His, Ser95Thr	none
7	509	Ala90Val, Asp94Gly, Ser95Thr	none
8	3507	Asp94His, Ser95Thr	none
9	633	Ala90Val, S94T	none
10	702	Asp94Gly	none
11	103RN	Ser95Thr	none
12	3470	Asp94Tyr, Ser95Thr	none
13	148RN	Ser95Thr	none
14	1031	Ser95Thr	none
15	2047	Asp94Gly, Ser95Thr	none
16	747	Ser95Thr, Asp94Asn	none
17	1481	Asp94Asn, Ser95Thr	none
18	1809	Ala90Val	Thr500Ala
19	1982	Ser95Thr, Asp94Gly	none
20	2321	Ser95Thr, Asp94Gly	none
21	335	Asp94Gly, Ser95Thr	none
22	3480	Ala90Val, Asp94Gly	none
23	2099	none	none
24	2427	Ser95Thr	none
25	891	Ala90Val, Ser95Thr	none
26	358RN	none	none
27	3118	Asp94Gly, Ser95Thr,	none
28	3334	Asp94Gly, Ser95Thr	none
29	3514	Asp94Gly, Ser95Thr	none
30	3516	Ser95Thr, Ala90Val	none
31	3537	none	none
32	10	Ala90Val	none
33	83	none	none
34	166	Ser95Thr, Asp94Asn	none
35	3900	Ser95Thr, Asp94Gly	none
36	4198	Ser95Thr, Asp94Gly	none

Novel SNPs are underlined

OFX^S strains of Mumbai

S. No.	Strain ID	<i>gyrA</i>	<i>gyrB</i>
1	105R	Ser95Thr	none
2	2	Ser95Thr	none
3	8	Ser95Thr	none
4	19	Ser95Thr	none
5	41	Ser95Thr	none
6	55	Ser95Thr	none
7	57	Ser95Thr	none
8	120	Ser95Thr	none
9	220	Ser95Thr	none
10	520	Ser95Thr	none
11	901	Ser95Thr	none

OFX^S strains of Lucknow

S. No.	Strain ID	<i>gyrA</i>	<i>gyrB</i>
1	43RN	Ser95Thr	none
2	47	Ser95Thr	none
3	40RN	Ser95Thr, Ala90Val	none
4	66	Ser95Thr	none
5	416	Asp94Gly, Ser95Thr	none
6	456	Ser95Thr	none
7	658	Ser95Thr	none
8	665	Ser95Thr	none
9	53	Ser95Thr	none
10	3506	none	none
11	65DP	none	none
12	34RN	Ser95Thr	none
13	131RN	Ser95Thr	none
14	13RN	none	none
15	28RN	none	none
16	44RN	Ser95Thr	none
17	125	Ser95Thr	none
18	482	none	none
19	641	Ser95Thr	none
20	653	Ser95Thr, Ala90Val	none
21	105	none	none
22	3509	none	none
23	81	Asp94Asn, Ser95Thr	none
24	3532	none	none
25	417	none	none
26	706	Ser95Thr	none
27	337	none	none
28	164	Asp94Gly, Ser95Thr,	none
29	2703	Ser95Thr	none
30	2705	Ser95Thr	none
31	2706	Ser95Thr, Asp94Asn, Ser91Pro	none

OFXND strains of Lucknow

S. No.	Strain ID	<i>gyrA</i>	<i>gyrB</i>
1	446	Ser95Thr	none

