

Supplemental material

Molecular epidemiology and presence of hybrid pathogenic *Escherichia coli* among isolates from community-acquired urinary tract infection

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Table S1 Primers and conditions used for phylogenetic classification ^a.

Reaction	Primers designation	Primers (5' – 3')	Cycles	Amplicon (bp)
Multiplex	chuA.1b	ATGGTACCGGACGAACCAAC	94 °C – 4 min; 30 × (94 °C – 5 s and 59 °C – 20 s); 72 °C – 5 min	288
	chuA.2	TGCCGCCAGTACCAAAGACA		
	yjaA.1b	CAAACGTGAAGTGTCAGGAG		211
	yjaA.2b	AATGCGTTCCTCAACCTGTG		
	TspE4C2.1b	CACTATTCGTAAGGTCATCC		152
	TspE4C2.2b	AGTTTATCGCTGCGGGTCGC		
	AceK.f	AACGCTATTCGCCAGCTTGC		400
phylogroup E	ArpA1.r	TCTCCCCATACCGTACGCTA	94 °C – 4 min; 30 × (94 °C – 5 s and 57 °C – 20 s); 72 °C – 5 min	301
	ArpAgpE.f	GATTCCATCTTGTCAAAATATGCC		
phylogroup C	ArpAgpE.r	GAAAAGAAAAAGAATTCCCAAGAG	94 °C – 4 min; 30 × (94 °C – 5 s and 59 °C – 20 s); 72 °C – 5 min	219
	trpAgpC.1	AGTTTTATGCCCAGTGCGAG		
Control ^b	trpAgpC.2	TCTGCGCCGGTCACGCCC		489
	trpBA.f	CGGCGATAAAGACATCTTCAC		
	trpBA.r	GCAACGCGGCCTGGCGGAAG		

^a according to the method described by Clermont et al 2013 [33]. ^b used as internal PCR control in reaction for phylogroups C and E

Reference

- Clermont, O.; Christenson, J.K.; Denamur, E.; Gordon, D.M. The Clermont *Escherichia coli* Phylo-Typing Method Revisited: Improvement of Specificity and Detection of New Phylo-Groups. *Environ. Microbiol. Rep.* **2013**, *5*, 58–65, doi:10.1111/1758-2229.12019.

Table S2. Primers and conditions used in PCR for amplification of *E. coli* virulence genes

Target gene	Primers (5' – 3')	Cycle	Product size (bp)	Reference
<i>afaBCIII</i>	F: GCTGGGCAGCAAACCTGATAACTCTC R: CATCAAGCTGTTTGTTCGTCGCCCG	94 °C – 5 min; 25 × (94 °C – 2 min; 65 °C – 1 min; 72 °C – 2 min); 72 °C – 8 min	750	[94]
<i>afaEVIII</i>	F: CTAACCTTGCCATGCTGTGACAGTA R: TTATCCCCTGCGTAGTTGTGAATC	94 °C – 5 min; 25 × (94 °C – 2 min; 65 °C – 1 min; 72 °C – 2 min); 72 °C – 8 min	302	[95]
<i>aggR</i>	F: CGATACATTAAGACGCCTAAAG R: TCTGATACATTAAATTCATCTGC	94 °C – 5 min; 30 × (94 °C – 1 min; 56 °C – 1 min; 72 °C – 1 min); 72 °C – 7 min	346	[96]
<i>bfpB</i>	F: GACACCTCATTGCTGAAGTCG R: CCAGAACACCTCCGTTATGC	94 °C – 5 min; 30 × (94 °C – 30 s; 63 °C – 30 s; 72 °C – 90 s); 72 °C – 5 min	910	[96]
<i>bmaE</i>	F: ATGGCGCTAACTTGCCATGCTG R: AGGGGGACATATAGCCCCCTTC	95 °C – 12 min; 25 × (94 °C – 30 s; 63 °C – 30 s; 68 °C – 3 min); 72 °C – 10 min	507	[97]
<i>cdtA</i>	F: TTACTGGTTGCTCGAATGGGGATCGGT R: GACAGGTGGACTTATTGCCCATAGC	94 °C – 5 min; 30 × (94 °C – 30 s; 55 °C – 30 s; 72 °C – 1 min); 72 °C – 5 min	575	[98]
<i>cf29A</i>	F: TCAACAACACTATCAAGGAA R: ACCAAGTGCGTAAGAGGA	94 °C – 1 min; 30 × (94 °C – 30 s; 48 °C – 1 min; 72 °C – 90 s); 72 °C – 7 min	572	[99]
<i>chuA</i>	F: ATGGTACCGGACGAACCAAC R: TGCCGCCAGTACCAAGACA	94 °C – 4 min; 30 × (94 °C – 5 s; 59 °C – 20 s); 72 °C – 5 min	288	[33]
<i>cvaC</i>	F: CACACACAAACGGGAGCTGTT R: CTTCCCGCAGCATAGTTCCAT	95 °C – 12 min; 25 × (94 °C – 30 s; 63 °C – 30 s; 68 °C – 3 min); 72 °C – 10 min	680	[97]
<i>daaE</i>	F: GAACGTTGGTTAATGTGGGGTAA R: TATTCACCGGTTCGGTTATCAGT	94 °C – 5 min; 35 × (94 °C – 90 s; 60 °C – 90 s; 72 °C – 90 s); 72 °C – 5 min	542	[100]
<i>eae</i>	F: CCCGGCACAAGCATAAGCTAA R: ATGACTCATGOCCAGCTCA	95 °C – 5 min; 35 × (94 °C – 1 min; 55 °C – 2 min; 72 °C – 1 min); 72 °C – 7 min	924	[101]
<i>elt</i>	F: GAACAGGAGGTTTCTGCGTTAGGTG R: CTTTCAATGGCTTTTTTTTGGGAGTC	94 °C – 5 min; 30 × (94 °C – 30 s; 63 °C – 30 s; 72 °C – 90 s); 72 °C – 5 min	655	[96]
<i>escV</i>	F: ATTCTGGCTCTCTTCTTTATGGCTG R: CGTCCCTTTTACAAACTTCATCGC	94 °C – 5 min; 30 × (94 °C – 30 s; 63 °C – 30 s; 72 °C – 90 s); 72 °C – 5 min	544	[96]
<i>estIa</i>	F: CCTCTTTTAGYCAGACARCTGAATCASTTG R: CAGGCAGGATTACAACAAAGTTCACAG	94 °C – 5 min; 30 × (94 °C – 30 s; 63 °C – 30 s; 72 °C – 90 s); 72 °C – 5 min	157	[96]
<i>estIb</i>	F: TGCTTTTTTACCTTTTCGCTC R: CGGTACAAGCAGGATTACAACAC	94 °C – 5 min; 30 × (94 °C – 30 s; 63 °C – 30 s; 72 °C – 90 s); 72 °C – 5 min	171	[96]
<i>fimA</i>	F: GTTGATCAAACCGTTCAG R: AATAACGCGCCTGGAACG	94 °C – 5 min; 27 × (94 °C – 45 s; 50 °C – 45 s; 72 °C – 1 min); 72 °C – 5 min	331	[102]
<i>fyuA</i>	F: GTAAACAATCTTCCCGCTCGGCAT R: TGACGATTAAACGAACCGGAAGGGA	95 °C – 15 min; 30 × (94 °C – 30 s; 63 °C – 90 s; 72 °C – 90 s); 72 °C – 10 min	850	[35]

<i>hlyA</i>	F: AACAAAGGATAAGCACTGTTCTGGCT R: ACCATATAAGCGGTCATTCCCGTCA	94 °C – 5 min; 30 × (94 °C – 1 min; 63 °C – 30 s; 72 °C – 3 min); 72 °C – 10 min	1177	[103]
<i>hra</i>	F: TCACTTGACAGACCAGCGTTTC R: GTAACACACTGCTGTACCT	94 °C – 3 min; 25 × (94 °C – 30 s; 58 °C – 30 s; 68 °C – 3 min); 72 °C – 10 min	537	[104]
<i>iha</i>	F: CAGGTCGGGGTTACCAAGT R: CAAATGGCTCTCTCCGTCATGC	94 °C – 5 min; 30 × (94 °C – 1 min; 59 °C – 1 min; 72 °C – 1 min); 72 °C – 7 min	925	[105]
<i>invE</i>	F: CGATAGATGGCGAGAAATTATATCCCG R: CGATCAAGAATCCCTAACAGAAGAATCAC	94 °C – 5 min; 30 × (94 °C – 30 s; 63 °C – 30 s; 72 °C – 90 s); 72 °C – 5 min	766	[96]
<i>ireA</i>	F: ATTGCCGTGATGTGTTCTGC R: CACGGATCACTTCAATGCGT	94 °C – 3 min; 25 × (94 °C – 30 s; 58 °C – 30 s; 68 °C – 3 min); 72 °C – 10 min	384	[104]
<i>iroN</i>	F: AAGTCAAAGCAGGGTTGCCCG R: GACGCCGACATTAAGACGCAG	95 °C – 12 min; 25 × (94 °C – 30 s; 63 °C – 30 s; 68 °C – 3 min); 72 °C – 10 min	665	[106]
<i>kpsMTIII</i>	F: TCCTCTTGCTACTATTCCCCCT R: AGGCGTATCCATCCCTCCTAAC	95 °C – 12 min; 25 × (94 °C – 30 s; 63 °C – 30 s; 68 °C – 3 min); 72 °C – 10 min	392	[97]
<i>kpsMTII</i>	F: GCGCATTTGCTGATACTGTTG R: CATCCAGACGATAAGCATGAGCA	95 °C – 12 min; 25 × (94 °C – 30 s; 63 °C – 30 s; 68 °C – 3 min); 72 °C – 10 min	272	[97]
<i>mat</i>	F: TATACGCTGGACTGAGTCGTG R: CAGGTAGCGTCGAACTGTA	94 °C – 3 min; 25 × (94 °C – 30 s; 58 °C – 30 s; 68 °C – 3 min); 72 °C – 10 min	899	[104]
<i>ompA</i>	F: AGCTATCGCGATTGCAGTG R: GGTGTTGCCAGTAACCGG	94 °C – 3 min; 25 × (94 °C – 30 s; 58 °C – 30 s; 68 °C – 3 min); 72 °C – 10 min	919	[104]
<i>ompT</i>	F: ATCTAGCCGAAGAAGGAGGC R: CCCGGGTCATAGTGTTATC	95 °C – 12 min; 25 × (94 °C – 30 s; 63 °C – 30 s; 68 °C – 3 min); 72 °C – 10 min	559	[107]
<i>papC</i>	F: GACGGCTGTACTGCAGGGTGTGGCG R: ATATCCTTTCTGCAGGGATGCAATA	94 °C – 5 min; 25 × (94 °C – 2 min; 65 °C – 1 min; 72 °C – 2 min); 72 °C – 8 min	328	[94]
<i>pet</i>	F: GTGTTTCAACCAGGTTCAACA R: CCTTCACCAATTTATGCAGT	95 °C – 15 min; 30 × (94 °C – 1 min; 52 °C – 1 min; 72 °C – 90 s); 72 °C – 10 min	1037	[108]
<i>pic</i>	F: AGCCGTTTCCGCAGAAGCC R: AAATGTCAGTGAACCGACGATTGG	94 °C – 5 min 30 × (94 °C – 30 s; 63 °C – 30 s; 72 °C – 1,5 min); 72 °C – 5 min	1111	[96]
<i>saa</i>	F: CGTGATGAACAGGCTATTGC R: ATGGACATGCCTGTGGCAAC	94 °C – 5 min; 30 × (94 °C – 30 s; 55 °C – 30 s; 72 °C – 30 s); 72 °C – 5 min	119	[109]
<i>sat</i>	F: TGCTGGCTCTGGAGGAAC R: TTGAACATTACAGTACCGGG	94 °C – 3 min; 25 × (94 °C – 30 s; 58 °C – 30 s; 68 °C – 3 min); 72 °C – 10 min	667	[104]
<i>sfaDE</i>	F: CGGAGGAGTAATTACAAACCTGGCA R: CTCCGGAGAAGTGGGTGCATCTTAC	94 °C – 5 min; 25 × (94 °C – 2 min; 65 °C – 1 min; 72 °C – 2 min); 72 °C – 8 min	410	[94]
<i>shf</i>	F: ACTTTCTCCCGAGACATTC R: CTTTAGCGGGAGCATTCAT	94 °C – 3 min; 25 × (94 °C – 30 s; 58 °C – 30 s; 68 °C – 3 min); 72 °C – 10 min	613	[110]
<i>sitA</i>	F: AGGGGGCACAACGATTCTCG R: TACCGGGCCGTTTTCTGTGC	94 °C – 5 min; 30 × (94 °C – 30 s; 59 °C – 30 s; 72 °C – 3 min); 72 °C – 10 min	608	[111]

<i>stx1</i>	F: CGATGTTACGGTTTGTACTGTGACAGC R: AATGCCACGCTTCCCAGAATTG	94 °C – 5 min; 30 × (94 °C – 30 s; 63 °C – 30 s; 72 °C – 90 s); 72 °C – 5min	244	[96]
<i>stx2</i>	F: GTTTTGACCATCTTCGTCTGATTATTGAG R: AGCGTAAGGCTTCTGCTGTGAC	94 °C – 5 min; 30 × (94 °C – 30 s; 63 °C – 30 s; 72 °C – 90 s); 72 °C – 5 min	324	[96]
<i>traT</i>	F: GGTGTGGTGCGATGAGCACAG R: CACGGTTCAGCCATCCCTGAG	95 °C – 12 min; 25 × (94 °C – 30 s; 63 °C – 30 s; 68 °C – 3 min); 72 °C – 10 min	290	[97]
<i>tsh</i>	F: GGTGGTGCCTGGAGTGG R: AGTCCAGCGTGATAGTGG	94 °C – 3 min; 25 × (94 °C – 30 s; 58 °C – 30 s; 68 °C – 3 min); 72 °C – 10 min	620	[112]
<i>vat</i>	F: TCAGGACACGTTCAGGCATTTCAGT R: GGCCAGAACATTTGCTCCCTTGTT	95 °C –15 min; 30 × (94 °C – 30 s; 63 °C – 90 s; 72 °C – 90 s); 72 °C – 10 min	1100	[35]
<i>yfcV</i>	F: ACATGGAGACCACGTTTACC R: GTAATCTGGAATGTGGTCAGG	95 °C –15 min; 30 × (94 °C – 30 s; 63 °C – 90 s; 72 °C – 90 s); 72 °C – 10 min	292	[35]

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Table S3. Virulence profile, phylogenetic origin, and characterization of intrinsic virulence and uropathogenic potential of strains isolated from urine in the Mogi Guaçu community

Strains ^a	Virulence profile ^b	Phylogroup ^c	ExPEC+ ^d	UPEC+ ^d
LSC 001	<i>fimA, ompT, ompA, hra, sitA, mat, kpsMTIII, saa, cdtA, iroN, papC, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 002	<i>fimA, ompT, ompA, hra, sitA, sat, iha, mat, ireA, traT, iucD, fyuA, yfcV, chuA</i>	B2	-	-
LSC 003	<i>fimA, ompT, ompA, hra, sitA, kpsMTIII, mat, ireA, iroN, traT, papC, vat, fyuA, yfcV, chuA</i>	B2	-	+
LSC 004	<i>fimA, ompT, ompA, hra, sitA, sat, iha, mat, ireA, saa, iroN, papC, kpsMTII, iucD, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 005	<i>fimA, ompA, ompT, sitA, mat, traT, chuA</i>	E	-	-
LSC 006	<i>fimA, ompA, ompT, mat</i>	A	-	-
LSC 007	<i>fimA, ompA, shf, ireA, traT, fyuA</i>	A	-	-
LSC 008	<i>fimA, ompA, ompT, mat</i>	A	-	-
LSC 009	<i>fimA, ompA, hra, sitA, mat, tsh, ireA, saa, iroN, traT, iucD, vat, fyuA, yfcV, chuA</i>	B2	-	+
LSC 010	<i>fimA, ompA, ompT, cvaC, sitA, mat, saa, pet, kpsMTII, vat, fyuA, yfcV, chuA</i>	NC ^e	-	+
LSC 011	<i>fimA, ompA, hra, ompT, sitA, sat, iha, mat, pet, traT, iucD, fyuA, yfcV, chuA</i>	B2	-	-
LSC 012	<i>fimA, ompA, sitA, sat, iha, saa, pet, daaE, traT, sfaDE, iucD, fyuA, yfcV, chuA</i>	B2	+	-
LSC 013	<i>fimA, ompA, ompT, sitA, sat, iha, mat, ireA, pet, traT, iucD, fyuA, yfcV, chuA</i>	B2	-	-
LSC 014	<i>fimA, ompA, hra, ompT, sitA, sat, iha, pic, ireA, saa, pet, iroN, papC, iucD, chuA</i>	B2	+	-
LSC 015	<i>fimA, ompA, traT, kpsMTII</i>	A	-	-
LSC 016	<i>fimA, ompA, sitA, traT</i>	A	-	-
LSC 017	<i>fimA, ompA, hra, ompT, sitA, saa, iroN, traT, papC, chuA</i>	B2	-	-
LSC 018	<i>fimA, ompA, ompT, sitA, pic, chuA</i>	B2	-	-
LSC 019	<i>fimA, mat</i>	A	-	-
LSC 020	<i>fimA, ompT, sitA, pic, iroN, traT, papC, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 021	<i>fimA, sitA, traT</i>	NC	-	-
LSC 022	<i>fimA, sitA, iucD, fyuA</i>	A	-	-
LSC 023	<i>fimA, ompT, sitA, iroN, traT, iucD, vat, fyuA, chuA</i>	NC	-	-
LSC 024	<i>fimA</i>	C	-	-
LSC 025	<i>fimA, kpsMTII, chuA</i>	D	-	-
LSC 026	<i>fimA, ompT, sitA, sat, iha, ireA, iroN, traT, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	-	+
LSC 027	<i>fimA, sitA, shf</i>	C	-	-

Table S3. Virulence profile, phylogenetic origin, and characterization of intrinsic virulence and uropathogenic potential of strains isolated from urine in the Mogi Guaçu community. Continued

Strains ^a	Virulence profile ^b	Phylogroup ^c	ExPEC+ ^d	UPEC+ ^d
LSC 028	<i>fimA, ompT, ompA, sitA, pic, shf, saa, traT, vat, fyuA, yfcV, chuA</i>	B2	-	+
LSC 029	<i>fimA, ompT, ompA, iroN, traT, iucD</i>	B1	-	-
LSC 030	<i>fimA, ompA, hra, sitA, iroN, traT</i>	B1	-	-
LSC 031	<i>fimA, ompT, ompA, saa, pet, traT, vat, fyuA, yfcV, chuA</i>	B2	-	+
LSC 032	<i>fimA, ompT, ompA, hra, sitA, sat, iha, traT, chuA</i>	E	-	-
LSC 033	<i>fimA, ompT, ompA, hra, sitA, saa, traT, papC, kpsMTII, sfaDE, iucD, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 034	<i>fimA, ompT, ompA, pet, iroN, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	-	+
LSC 036	<i>fimA, saa, sitA, ompT, iroN, traT, papC, sfaDE, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 037	<i>fimA, ompA, chuA</i>	B2	-	-
LSC 038	<i>fimA, sitA, ompT, papC, kpsMTII, fyuA, chuA</i>	D	+	-
LSC 039	<i>fimA, shf, ompA, traT, papC, iucD</i>	B1	+	-
LSC 040	<i>fimA, sitA, cvaC, ompA, iroN, traT, fyuA</i>	B1	-	-
LSC 041	<i>fimA, ompT, ompA, sfaDE, chuA</i>	F	-	-
LSC 042	<i>fimA, sitA, cvaC, ompA, iroN, traT</i>	C	-	-
LSC 043	<i>fimA, sitA, ompT, ompA, iroN, papC, sfaDE, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 044	<i>fimA, shf, sitA, sat, iha, ompT, ompA, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	-	+
LSC 045	<i>fimA, saa, cdtA, sitA, sat, iha, ompT, ompA, hra, traT, papC, iucD, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 046	<i>fimA, ompA, traT, papC, fyuA</i>	A	-	-
LSC 047	<i>fimA, sitA, ompA, hra, iroN, traT, ompT, sfaDE, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 048	<i>fimA, ompA</i>	A	-	-
LSC 049	<i>fimA, saa, sitA, cvaC, ompT, ompA, iroN, traT, papC, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 050	<i>fimA, sitA, iroN, traT, ompT, papC, sfaDE, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 051	<i>fimA, shf, sitA, traT</i>	A	-	-
LSC 052	<i>fimA, ompA, sitA, traT, aggR, kpsMTII, chuA</i>	D	-	-
LSC 053	<i>fimA, ompA, hra, sitA, iroN, traT, ompT, cvaC, iucD, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 054	<i>fimA, ompA, hra, sitA, saa, iroN, traT, ompT, sfaDE, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 055	<i>fimA, ompA, hra, sitA, iroN, traT, iucD</i>	A	-	-

Table S3. Virulence profile, phylogenetic origin, and characterization of intrinsic virulence and uropathogenic potential of strains isolated from urine in the Mogi Guaçu community. Continued

Strains ^a	Virulence profile ^b	Phylogroup ^c	ExPEC+ ^d	UPEC+ ^d
LSC 056	<i>fimA, ompA, hra, sitA, sat, traT, ompT, papC, iucD, kpsMTII, fyuA, yfcV, chuA</i>	B2	+	-
LSC 057	<i>fimA, ompA, hra, sitA, sat, traT, ompT, papC, iucD, kpsMTII, fyuA, yfcV, chuA</i>	B2	+	-
LSC 058	<i>fimA, ompA, sitA, sat, hlyA, ompT, iucD, kpsMTII, fyuA, yfcV, chuA</i>	B2	+	-
LSC 059	<i>fimA, ompA, hra, sitA, iroN, traT, cvaC, papC, iucD, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 060	<i>fimA, ompA, hra, ompT, vat, fyuA, yfcV, chuA</i>	B2	-	+
LSC 061	<i>fimA, ompA, traT</i>	A	-	-
LSC 062	<i>fimA, ompA, hra, hlyA, ompT, sfaDE, kpsMTII, chuA</i>	B2	+	-
LSC 063	<i>fimA, ompA, sitA, ompT, papC, iucD</i>	C	+	-
LSC 064	<i>fimA, ompA, hra,</i>	A	-	-
LSC 065	<i>fimA, ompA, sitA, sat, traT, ompT, papC, iucD, kpsMTII, chuA</i>	B2	+	-
LSC 066	<i>fimA, ompA, hra, traT</i>	A	-	-
LSC 067	<i>fimA, ompA, sitA, sat, saa, ompT, papC, kpsMTII, chuA</i>	B2	+	-
LSC 068	<i>fimA, ompA, saa, ompT, chuA</i>	F	-	-
LSC 069	<i>fimA, ompA, sitA, sat, iroN, traT, hlyA, ompT, sfaDE, kpsMTII, chuA</i>	B2	+	-
LSC 070	<i>fimA, ompA, iroN, traT, cvaC, papC, iucD, kpsMTII, fyuA, yfcV, chuA</i>	B2	+	-
LSC 071	<i>fimA, ompA, ompT</i>	A	-	-
LSC 072	<i>fimA, ompA, hra, chuA</i>	B2	-	-
LSC 073	<i>fimA, ompA, ompT, eae, escV, vat, fyuA, yfcV, chuA</i>	B2	-	+
LSC 074	<i>fimA, ompA, iroN, traT, ompT, sfaDE</i>	B1	-	-
LSC 075	<i>fimA, ompA, iroN, traT, ompT, papC, sfaDE, kpsMTII, chuA</i>	B2	+	-
LSC 076	<i>fimA, ompA, hra, shf, fyuA, yfcV</i>	B1	-	-
LSC 077	<i>fimA, ompA, traT, ompT, chuA</i>	B2	-	-
LSC 078	<i>fimA, ompA, cdtA, kpsMTII, fyuA, yfcV</i>	B1	-	-
LSC 079	<i>fimA, iroN, traT, hlyA, ompT, sfaDE, kpsMTII, fyuA, chuA</i>	B2	+	-
LSC 080	<i>fimA, mat, hlyA, ompT, fyuA, yfcV</i>	C	-	-
LSC 081	<i>fimA, mat, daaE, traT, ompT, papC, kpsMTII, chuA</i>	D	+	-
LSC 082	<i>fimA, mat, ompA, hra, ompT, kpsMTII, fyuA, chuA</i>	F	-	-

Table S3. Virulence profile, phylogenetic origin, and characterization of intrinsic virulence and uropathogenic potential of strains isolated from urine in the Mogi Guaçu community. Continued

Strains ^a	Virulence profile ^b	Phylogroup ^c	ExPEC+ ^d	UPEC+ ^d
LSC 083	<i>fimA, saa, pet, ompA, hra, hlyA, traT, ompT, papC, kpsMTII, chuA</i>	B2	+	-
LSC 084	<i>fimA, mat, ompA, iroN, ompT, fyuA, yfcV, chuA</i>	B2	-	-
LSC 085	<i>fimA, mat, traT, ompT, papC, iucD, kpsMTII, fyuA, yfcV, chuA</i>	E	+	-
LSC 087	<i>fimA, mat, ompA, hra, traT, ompT, kpsMTII, fyuA, chuA</i>	E	-	-
LSC 088	<i>fimA, mat, traT, papC, fyuA</i>	A	-	-
LSC 089	<i>fimA, saa, mat, pet, cdtA, ompA, hra, hlyA, iroN, traT, ompT, papC, kpsMTII, fyuA, chuA</i>	B2	+	-
LSC 090	<i>fimA, mat, ompA, ompT, vat, fyuA, yfcV</i>	C	-	-
LSC 091	<i>fimA, mat, ompA, hra, papC, iucD</i>	C	+	-
LSC 092	<i>fimA, ompA, hra, papC, fyuA</i>	C	-	-
LSC 093	<i>fimA, saa, iroN, hlyA, pet, ompA, ompT, sfaDE, kpsMTII, fyuA, chuA</i>	B2	+	-
LSC 094	<i>fimA, traT, shf, ompA, vat, fyuA, yfcV</i>	B1	-	-
LSC 096	<i>fimA, fyuA</i>	A	-	-
LSC 097	<i>fimA, saa, iroN, hlyA, ompA, sfaDE, chuA</i>	B2	-	-
LSC 098	<i>tratT, ompA, vat, fyuA, yfcV</i>	A	-	-
LSC 099	<i>fimA, saa, ompA, hra</i>	B1	-	-
LSC 100	<i>fimA, saa, iroN, tratT, hlyA, pet, mat ompA, hra, ompT, papC, sfaDE, kpsMTII, chuA</i>	B2	+	-
LSC 101	<i>fimA, saa, iroN, hlyA, pet, cdtA, mat ompA, hra, ompT, papC, sfaDE, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 102	<i>fimA, iroN, tratT, hlyA, pet, mat, ompA, hra, papC, sfaDE, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 103	<i>iroN, tratT, mat, ompA, ompT, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	-	+
LSC 104	<i>iroN, tratT, hlyA, mat, ompA, hra, ompT, iucD, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 105	<i>fimA, tratT, hlyA, pet, mat ompA, hra, ompT, papC, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 106	<i>fimA, saa, traT, mat, ompA, ompT, iucD, kpsMTII, fyuA, yfcV</i>	C	+	-
LSC 107	<i>fimA, saa, iroN, tratT, mat, ireA, ompA, papC, sfaDE, chuA</i>	B2	+	-
LSC 108	<i>fimA, iroN, tratT, hlyA, pet, mat, ompA, hra, cvaC, ompT, iucD, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 109	<i>fimA, iroN, tratT, pet, mat, ompA, ompT, kpsMTII, vat, yfcV, chuA</i>	B2	-	-
LSC 110	<i>shf, mat, ompA, cvaC, ompT, iucD, kpsMTII, fyuA, yfcV</i>	B1	+	-
LSC 111	<i>fimA, iroN, tratT, shf, mat, ompA, hra, cvaC, kpsMTII</i>	B1	-	-

Table S3. Virulence profile, phylogenetic origin, and characterization of intrinsic virulence and uropathogenic potential of strains isolated from urine in the Mogi Guaçu community. Continued

Strains ^a	Virulence profile ^b	Phylogroup ^c	ExPEC+ ^d	UPEC + ^d
LSC 112	<i>fimA, saa, pet, mat, ireA, ompA, hra, ompT, papC, iucD, kpsMTII, fyuA, chuA</i>	B2	+	-
LSC 113	<i>fimA, mat, vat, fyuA, yfcV</i>	NC	-	-
LSC 114	<i>fimA, iroN, tratT, ompT, mat, ireA, papC, kpsMTII, chuA</i>	E	+	-
LSC 115	<i>fimA, iroN, pic, ompT, hra, mat, ireA, sfaDE, kpsMTII, chuA</i>	B2	+	-
LSC 116	<i>fimA, ompT, sitA, mat, iucD, kpsMTII, yfcV, chuA</i>	B2	+	-
LSC 117	<i>fimA, ompA, mat, yfcV</i>	NC	-	-
LSC 118	<i>fimA, iroN, tratT, pic, ompT, ompA, hra, sitA, mat, sfaDE, kpsMTII, chuA</i>	B2	+	-
LSC 119	<i>fimA, iroN, coaC, ompT, ompA, hra, sitA, mat, papC, sfaDE, iucD, kpsMTII, yfcV, chuA</i>	B2	+	-
LSC 120	<i>fimA, ompT, sitA, mat, papC, iucD, yfcV</i>	C	+	-
LSC 121	<i>fimA, saa, iroN, traT, ompT, sitA, mat, papC, sfaDE, kpsMTII, chuA</i>	B2	+	-
LSC 122	<i>fimA, sitA, mat, yfcV</i>	A	-	-
LSC 123	<i>fimA, saa, traT, ompT, ompA, sitA, mat, kpsMTII, chuA</i>	B2	-	-
LSC 124	<i>fimA, ompT, ompA, hra, sitA, sat, iha, mat, papC, iucD, kpsMTII, yfcV, chuA</i>	B2	+	-
LSC 126	<i>iucD, vat, fyuA, yfcV</i>	NC	-	-
LSC 127	<i>fimA, iroN, hlyA, pic, ompT, ompA, hra, sitA, mat, iucD, kpsMTII, chuA</i>	B2	+	-
LSC 128	<i>fimA, saa, iroN, tratT, coaC, ompT, ompA, sitA, mat, ireA, papC, iucD, kpsMTII, fyuA, yfcV, chuA</i>	B2	+	-
LSC 129	<i>fimA, saa, iroN, hlyA, pic, ompT, hra, sitA, sat, iha, mat, ireA, papC, sfaDE, iucD, kpsMTII, fyuA, yfcV, chuA</i>	B2	+	-
LSC 131	<i>fimA, ompA, mat, papC</i>	A	-	-
LSC 132	<i>fimA, iroN, ompT, ompA, mat, iucD, fyuA</i>	B1	-	-
LSC 133	<i>fimA, ompA</i>	B1	-	-
LSC 134	<i>fimA, ompA, yfcV, chuA</i>	B2	-	-
LSC 135	<i>ompA, mat</i>	A	-	-
LSC 136	<i>fimA, saa, iroN, hlyA, pic, ompT, ompA, hra, sitA, mat, sfaDE, kpsMTII, fyuA, yfcV, chuA</i>	B2	+	-
LSC 137	<i>fimA, saa, ompT, ompA, hra, sitA, mat, papC, sfaDE, kpsMTII, fyuA, yfcV, chuA</i>	B2	+	-
LSC 138	<i>fimA, ompA, hra, sitA, iha, mat, fyuA</i>	A	-	-
LSC 139	<i>ompA, mat</i>	A	-	-
LSC 140	<i>fimA, ompT, ompA, sitA, chuA</i>	F	-	-

Table S3. Virulence profile, phylogenetic origin, and characterization of intrinsic virulence and uropathogenic potential of strains isolated from urine in the Mogi Guaçu community. Continued

Strains ^a	Virulence profile ^b	Phylogroup ^c	ExPEC+ ^d	UPEC + ^d
LSC 141	<i>fimA, ompT, ompA, sitA, mat, kpsMTII, chuA</i>	E	-	-
LSC 142	<i>traT, shf, ompA, sitA, mat, iucD</i>	A	-	-
LSC 143	<i>fimA, ompA, mat</i>	B1	-	-
LSC 144	<i>fimA, ompT, ompA, sitA, mat, kpsMTII, fyuA, yfcV, chuA</i>	B2	-	-
LSC 145	<i>fimA, iroN, traT, cvaC, ompT, ompA, sitA, mat, papC, fyuA</i>	C	-	-
LSC 146	<i>fimA, saa, ompT, ompA, hra, sitA, mat, kpsMTII, fyuA, yfcV, chuA</i>	B2	-	-
LSC 147	<i>fimA, iroN, cvaC, ompT, ompA, sitA, sfaDE</i>	NC	-	-
LSC 148	<i>fimA, shf, ompT, ompA, sitA, mat, iucD, fyuA</i>	B1	-	-
LSC 149	<i>fimA, ompT, ompA, sitA, mat</i>	NC	-	-
LSC 150	<i>fimA, ompT, ompA, sitA, sat, iha, mat, kpsMTII, fyuA, yfcV, chuA</i>	B2	-	-
LSC 152	<i>fimA, ompT, ompA, mat, kpsMTII, fyuA</i>	NC	-	-
LSC 153	<i>fimA, sitA, sat, ompA</i>	NC	-	-
LSC 154	<i>fimA, ompA, hra</i>	NC	-	-
LSC 155	<i>fimA, ompT, ompA, hra, mat, iucD, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	+	+
LSC 156	<i>fimA, iroN, ompT, ompA, sitA, mat, fyuA</i>	C	-	-
LSC 158	<i>fimA, iroN, ompT, ompA, sitA, cdtA, mat, kpsMTII, vat, fyuA, yfcV, chuA</i>	B2	-	+
LSC 160	<i>fimA, iroN, ompA, mat, sfaDE, yfcV, chuA</i>	B2	-	-
LSC 161	<i>fimA, ompT, ompA, hra, sitA, mat, kpsMTII, fyuA, yfcV, chuA</i>	B2	-	-
LSC 162	<i>fimA, ompT, ompA, hra, kpsMTII, fyuA, chuA</i>	E	-	-
LSC 163	<i>fimA, ompT, ompA, hra, fyuA, yfcV, chuA</i>	F	-	-
LSC 164	<i>ompA, hra</i>	C	-	-
LSC 165	<i>fimA, iroN, ompT, ompA, hra</i>	B1	-	-
LSC 166	<i>fimA, ompA, hra</i>	B1	-	-
LSC 168	<i>fimA, ompT, ompA, hra, sitA, iha, papC, kpsMTII, fyuA, yfcV, chuA</i>	B2	+	-
LSC 169	<i>fimA, saa, ompT, ompA, sitA, iha</i>	B1	-	-
LSC 170	<i>fimA, shf, saa, ompA, hra, kpsMTII, fyuA, chuA</i>	E	-	-
LSC 171	<i>fimA, saa, cvaC, ompT, ompA, sitA, sat, iha, fyuA</i>	B1	-	-

Table S3. Virulence profile, phylogenetic origin, and characterization of intrinsic virulence and uropathogenic potential of strains isolated from urine in the Mogi Guaçu community. Continued

Strains ^a	Virulence profile ^b	Phylogroup ^c	ExPEC+ ^d	UPEC+ ^d
LSC 172	<i>fimA, shf, saa, ompT, ompA, sitA</i>	B1	-	-
LSC 173	<i>fimA, ompA, sitA, fyuA</i>	A	-	-
LSC 174	<i>fimA, ireA, ompA, sitA, fyuA, yfcV</i>	NC	-	-
LSC 175	<i>fimA, ompT, ompA, sitA, kpsMTII, fyuA</i>	A	-	-
LSC 176	<i>fimA, ompA, sitA, sat, iha</i>	A	-	-
LSC 178	<i>fimA, ompT, ompA, sitA, yfcV, chuA</i>	B2	-	-
LSC 180	<i>fimA, cvaC, ompT, ompA, sitA, kpsMTII, fyuA, chuA</i>	E	-	-
LSC 182	<i>fimA, ompT, sitA, iha, kpsMTII</i>	NC	-	-
LSC 183	<i>fimA, ompA, sitA, eae, escV</i>	B1	-	-
LSC 184	<i>fimA, ompA, hra, sitA, papC</i>	C	-	-

^a The hybrid *E. coli* strains identified are shown in red; ^b VFs related to molecular classification into ExPEC+ (at least two among *papC*, *afaBCIII*, *sfaDE*, *iucD*, *kpsMTII*), UPEC+ (simultaneous presence of *vat*, *yfcV*, *chuA*, *fyuA*) or DEC (*aggR*, *eae*, *escV*) are in bold; ^c According to the multiplex PCR described by Clermont et al. 2013; ^d ExPEC+ means intrinsic virulence; UPEC+ means uropathogenic potential; ^e NC – not classified; (+) strains that fulfill the assessed criterium; (-) strains that do not fulfill the assessed criterium.

Table S4. Frequency of phylogroups and molecular classification markers regarding occurrence of UTI symptoms [n(%)]

Traits	ABU (n=36)	UTI (n=94)
Phylogroups		
A	8 (22.2)	12 (12.7)
B1	5 (13.8)	12 (12.7)
B2	13 (36.1)	44 (46.8)
C	4 (11.1)	6 (6.3)
D	0 (0)	4 (4.2)
E	1 (2.7)	6 (6.3)
F	1 (2.7)	4 (4.2)
NC	4 (11.1)	5 (5.3)
Molecular classification ^a		
ExPEC+	12 (33.3)	33 (35.1)
UPEC+	7 (19.4)	16 (17)
DEC	2 (5.5)	1 (1)

^a The molecular classification was performed as follows: intrinsic virulence (ExPEC+), presence of at least two of the genes *papC*, *afaBCIII*, *sfaDE*, *iucD*, and *kpsMTII*; uropathogenic potential (UPEC+), the simultaneous presence of *vat*, *chuA*, *fyuA*, and *yfcV*; DEC, presence of a virulence marker used in the molecular diagnosis of the DEC pathotypes (*cae*, *escV*, *bfpB*, *aggR*, *stx1*, *stx2*, *eltA*, *estA*, and *invE*). ABU – Asymptomatic bacteriuria; UTI – Urinary tract infection. Groups were compared using Fisher Exact test ($P < 0.05$) and no difference was identified. NC, non-classifiable by Clermont method.