

Supplementary Material.

Table S1: Primers and annealing temperatures used in the PCR reactions of this study.

Primer name	Sequence (5' → 3')	Target gene	PCR product size (bp)	Annealing temperature (°C)	Reference
acsA-F	ACCTGGTGTACGCCTCGCTGAC	<i>acsA</i>	842	54	1
acsA-R	GACATAGATGCCCTGCCCCTTGAT				
aroE-F	TGGGGCTATGACTGGAAACC	<i>aroE</i>	1053	55	1
aroE-R	TAACCCGGTTTTGTGATTCCTACA				
guaA-F	CGGCCTCGACGTGTGGATGA	<i>guaA</i>	940	56	1
guaA-R	GAACGCCTGGCTGGTCTTGTGGTA				
mutL-F	CCAGATCGCCGCCGGTGAGGTG	<i>mutL</i>	940	58	1
mutL-R	CAGGGTGCCATAGAGGAAGTC				
nuoD-F	ACCGCCACCCGTA CTG	<i>nuoD</i>	1042	55	1
nuoD-R	TCTCGCCCATCTTGACCA				
ppsA-F	GGTCGCTCGGTCAAGGTAGTGG	<i>ppsA</i>	989	56	1
ppsA-R	GGGTTCTCTTCTTCCGGCTCGTAG				
trpE-F	GCGGCCAGGGTCGTGAG	<i>trpE</i>	811	56	1
trpE-R	CCCGGCGCTTGTTGATGGTT				
exoU-F	ATGCATATCCAATCGTTG	<i>exoU</i>	2000	55	2
exoU-R	TCATGTGAACTCCTTATT				
exoS-F	GCGAGGTCAGCAGAGTATCG	<i>exoS</i>	118	60	2
exoS-R	TTCGGCGTCACTGTGGAT				
exoY-F	CGGATTCTATGGCAGGGAGG	<i>exoY</i>	289	60	2
exoY-R	GCCCTTGATGCACTCGACCA				
exoT-F	AATCGCCGTCCA ACTGCATGCG	<i>exoT</i>	152	60	2
exoT-R	TGTTGCGCCGAGG TACTGCTC				
exoA-F	GACAACGCCCTCAGCATCACCAGC	<i>exoA</i>	396	60	2

exoA-R	CGCTGGCCCATTCGCTCCAGCGCT				
lasA-F	CGCCATCCAACCTGATGCAAT	<i>lasA</i>	514	60	2
lasA-R	AGGCCGGGGTTGTACAACGGA				
lasB-F	TTCTACCCGAAGGACTGATAC	<i>lasB</i>	153	55	2
lasB-R	AACACCCATGATCGCAAC				
aprA-F	ACCCTGTCCTATTCGTTCC	<i>aprA</i>	140	55	2
aprA-R	GATTGCAGCGACAACCTTG				
rhlAB-F	TCATGGAATTGTCACAACCGC	<i>rhlAB</i>	151	60	2
rhlAB-R	ATACGGCAAATCATGGCAAC				
rhlI-F	CTTGGTCATGATCGAATTGCTC	<i>rhlI</i>	625	60	2
rhlI-R	ACGGCTGACGACCTCACAC				
rhlR-F	CAATGAGGAATGACGGAGGC	<i>rhlR</i>	730	60	2
rhlR-R	GCTTCAGATGAGGCCAGC				
lasI-F	ATGATCGTACAAATTGGTCGGC	<i>lasI</i>	605	60	2
lasI-R	GTCATGAAACCGCCAGTCG				
lasR-F	CGGGTATCGTACTAGGTGCATCA	<i>lasR</i>	1100	60	2
lasR-R	GACGGGAAAGCCAGGAAACTT				
intI1-F	GGGTCAAGGATCTGGATTTTCG	<i>intI1</i>	483	62	3
intI1-R	ACATGCGTGTAATCATCGTCG				
intI2-F	CACGGATATGCGACAAAAGGT	<i>intI2</i>	788	62	3
intI2-R	GTAGCAAACGAGTGACGAAATG				
intI3-F	GCCTCCGGCAGCGACTTTCAG	<i>intI3</i>	979	62	3
intI3-R	ACGGATCTGCCAAACCTGACT				
qacEΔ1-F	GGCTGGCTTTTTCTTGTTATCG	<i>qacEΔ1-sul1</i>	1125	63	3
sul1-R	GCGAGGGTTTCCGAGAAGGTG				
OprDlong-F	CTACGCAGATGCGACATGC	<i>oprD</i>	1586	55	4

OprDlong-R	CCTTTATAGGCGCGTTGCC				
OprD-F	CGCCGACAAGAAGAACTAGC	<i>oprD</i>	1413	55	5
OprD-R	GTCGATTACAGGATCGACAG				

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2. Petit SM, Lavenir R, Colignon-Dupuich C, Boukerb AM, Cholley P, Bertrand X, Freney J, Doléans-Jordheim A, Nazaret S, Laurent F, Cournoyer B (2013) Lagooning of wastewaters favors dissemination of clinically relevant *Pseudomonas aeruginosa*. *Res Microbiol* 164(8):856-866.
3. Sáenz Y, Briñas L, Domínguez E, Ruiz J, Zarazaga M, Vila J, Torres C (2004) Mechanisms of resistance in multiple-antibiotic-resistant *Escherichia coli* strains of human, animal and food origins. *Antimicrob Agents Chemother* 48:3996–4001.
4. Wolter DJ, Hanson ND, Lister PD (2004) Insertional inactivation of *oprD* in clinical isolates of *Pseudomonas aeruginosa* leading to carbapenem resistance. *FEMS Microbiol Lett* 236:137–143.
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Table S2. Characteristics of *P. aeruginosa* isolates recovered from faecal samples of children

Children			Strain ^b	Phenotype ^a	Patterns			
Individual (underlying diseases ^a)	Gender ^a	Age (years)			PFGE	MLST ^a	OprD ^d	Virulence ^e
1 (none)	M	13	Ps514	Susceptible	21	ST244	A	I
2 (none)	M	4	Pc6	Susceptible	35	-	A	I
3 (none)	M	7	Pc10	AZT,CAZ, FEP	39	ST244	A	II
4 (none)	M	13	Pc15	Susceptible	44	ST244	A	I
5 (atopic dermatitis)	M	1	Ps488	Susceptible	3	ST903	B	I
6 (none)	M	10	Ps492	Susceptible	6	ST132	B	I
7 (none)	M	1	Ps493	Susceptible	7	ST555	B	I
8 (weight delay)	M	3	Ps494	Susceptible	8	ST252	B	I
9 (none)	M	5	Ps495	Susceptible	9	ST27	B	I
10 (none)	F	2	Ps496	Susceptible	10	ST390	B	I
11 (none)	M	5	Ps497	Susceptible	10	ST390	B	I
12 (none)	F	11	Ps501	Susceptible	14	ST2241 ^c	B	I
13 (lactose intolerance)	F	1	Ps502	Susceptible	15	ST980	B	I
14 (none)	M	3	Ps507	Susceptible	18	ST139	B	I
15 (none)	M	2	Ps510	Susceptible	19	ST1205	B	III
16 (none)	F	5	Ps515	Susceptible	22	ST668	B	I
17 (none)	M	7	Ps516	Susceptible	23	ST1033	B	I
18 (none)	M	1	Ps518	Susceptible	25	ST27	B	I
19 (none)	M	2	Ps520	Susceptible	27	ST395	B	I
20 (none)	F	3	Ps521	Susceptible	28	ST499	B	I
21 (none)	M	8	Pc3	Susceptible	32	ST527	B	I
22 (none)	F	13	Pc8	Susceptible	37	-	B	I
23 (Williams syndrome)	F	0.25	Pc11	GEN	40	-	B	IV
24 (none)	F	2	Pc12	Susceptible	41	-	B	I
25 (none)	F	2	Pc13	Susceptible	42	-	B	I
26 (none)	M	5	Pc17	Susceptible	46	ST508	B	I

Children			Patterns					
Individual (underlying diseases ^a)	Gender ^a	Age (years)	Strain ^b	Phenotype ^a	PFGE	MLST ^a	OprD ^d	Virulence ^e
27 (none)	F	2	Pc19	Susceptible	48	-	B	I
28 (none)	F	9	Pc22	Susceptible	51	ST254	B	I
29 (none)	M	9	Pc24	Susceptible	53	-	B	V
30 (none)	F	2	Pc26	Susceptible	55	-	B	I
31 (anorexia)	F	13	Pc27	Susceptible	56	-	B	I
32 (none)	M	1	Pc28	Susceptible	57	-	B	I
33 (none)	M	3	Pc35	Susceptible	61	-	B	I
34 (none)	M	0.50	Pc39	Susceptible	65	-	B	I
35 (none)	M	4	Pc43	TZP, AZT, CAZ, FEP	68	ST274	B	I
36 (none)	M	2	Ps487	Susceptible	2	ST446	C	VII
37 (none)	F	0.14	Ps498	Susceptible	11	ST253	C	VII
38 (none)	F	0.11	Ps500	Susceptible	13	ST299	C	I
39 (weight delay)	M	0.06	Ps517	Susceptible	24	ST1197	C	VII
40 (atopic dermatitis)	F	1	Ps519	Susceptible	26	ST253	C	VIII
41 (none)	M	3	Ps522	Susceptible	29	ST1664	C	I
42 (none)	F	10	Pc4	Susceptible	33	ST1648	C	VI
43 (none)	F	13	Pc5	Susceptible	34	-	C	X
44 (cystic fibrosis)*	F	4	Pc7	TZP	36	-	C	VII
45 (none)	M	1	Pc14	Susceptible	43	-	C	VII
46 (none)	M	0.50	Pc18	Susceptible	47	ST2222 ^c	C	XII
47 (none)	F	7	Pc20	Susceptible	49	-	C	I
48 (none)	M	5	Pc29	Susceptible	58	ST2223 ^c	C	VII
49 (none)	M	0.33	Pc30	GEN, CIP	58	-	C	VII
50 (none)	F	2	Pc40	TZP, AZT, CAZ, FEP	66	-	C	I
51 (none)	M	7	Pc42	Susceptible	67	-	C	VII
52 (PD/D)	M	3	Ps489	Susceptible	4	ST1182	D	IX
53 (none)	M	2	Ps491	Susceptible	5	ST671	D	VII
54 (lactose intolerance)	F	0.33	Ps499	Susceptible	12	ST207	D	VII
55 (none)	F	1	Ps505	Susceptible	16	ST2242 ^c	D	IX

Children			Strain ^b	Phenotype ^a	Patterns			
Individual (underlying diseases ^a)	Gender ^a	Age (years)			PFGE	MLST ^a	OprD ^d	Virulence ^e
56 (none)	F	2	Ps512	Susceptible	20	ST560	D	VII
57 (none)	F	11	Pc2	Susceptible	31	ST1149	D	VII
58 (none)	M	1	Pc23	Susceptible	52	ST313	D	VII
59 (none)	M	1	Pc33	TZP, AZT, CAZ, FEP	60	ST1411	D	VII
60 (none)*	M	0.67	Pc37	Susceptible	63	ST313	D	XI
61 (none)	M	8	Pc38	Susceptible	64a	-	D	IX
62 (none)	F	1	Pc41	Susceptible	64b	-	D	IX
63 (none)	F	10	Pc16	Susceptible	45	ST2143	E	XII
64 (none)	M	1	Pc31	TZP, AZT, CAZ, FEP	59	ST667	E	IX
65 (none)	M	12	Pc32	Susceptible	59	-	E	IX
66 (none)	F	2	Pc36	Susceptible	62	ST667	E	XI
67 (none)	F	5	Ps486	Susceptible	1	ST277	F	I
68 (none)	M	2	Pc9	Susceptible	38	ST2125	F	I
69 (none)	M	2	Pc21	Susceptible	50	-	F	I
70 (none)	M	5	Pc25	Susceptible	54	-	F	VI
71 (none)	F	14	Ps506	CAZ	17	ST1398	G	I
72 (none)	F	1	Pc1	IPM	30	ST2221 ^c	H	XIII

^a Abbreviations: PD/D, psychomotor disturbance / delay; M, male; F, female; AZT, aztreonam; CAZ, ceftazidime; FEP, cefepime; GEN, gentamicin; TZP, piperacillin-tazobactam; IPM, imipenem; -, not determined. * This child had received antibiotic treatment in the three months previous to sampling.

^b Pc are strains from HLB; and Ps from HSP

^c New MLST detected

^d OprD patterns classified according to Table 2.

^e Virulence profiles defined according to Table 1.