

SUPPLEMENTARY INFORMATION

Table S1. Primers used in this study for screening of antimicrobial resistance genetic markers (ARG).

Target	Primer sequence (5' – 3')	Amplicon (bp)	Reference
<i>bla</i> _{CTX-M}	ATGTGCAGYACCAGTAAAG GGTCACCAGAAGGAGC	562	<i>Antimicrob Agents Chemother</i> 2009; 53 : 465-475
<i>bla</i> _{KPC}	ATGTCACTGTATCGCCGTCT TTTTCAGAGCCTTACTGCC	892	<i>Antimicrob Agents Chemother</i> 2009; 53 : 465-475
<i>bla</i> _{SHV}	CTTTACTCGCCTTTATCGGC TTACCGACCGGCATCTTTCC	982	<i>Antimicrob Agents Chemother</i> 2009; 53 : 465-475
<i>bla</i> _{TEM}	GTGCGCGGAACCCCTATT TTACCAATGCTTAATCAGTGAGGC	968	<i>Antimicrob Agents Chemother</i> 2009; 53 : 465-475
<i>bla</i> _{OXA-23}	GATCGGATTGGAGAACCAGA ATTTCTGACCGCATTTCCAT	501	<i>Int J Antimicrob Agents</i> 2006; 27 : 351-353
<i>bla</i> _{OXA-51}	TAATGCTTTGATCGGCCTTG TGGATTGCACCTTCATCTTGG	353	<i>Int J Antimicrob Agents</i> 2006; 27 : 351-353
<i>bla</i> _{OXA-24}	GGTTAGTTGGCCCCCTTAAA AGTTGAGCGAAAAGGGGATT	246	<i>Int J Antimicrob Agents</i> 2006; 27 : 351-353
<i>bla</i> _{OXA-143}	TGGCACTTTCAGCAGTTCCT TAATCTTGAGGGGGCCAACC	149	<i>Int J Antimicrob Agents</i> 2010; 35 : 305
<i>bla</i> _{OXA-58}	AAGTATTGGGGCTTGTGCTG CCCCTCTGCGCTCTACATAC	599	<i>Int J Antimicrob Agents</i> 2006; 27 : 351-353
<i>bla</i> _{OXA-10}	TCTTTCGAGTACGGCATTAGC CCAATGATGCCCTCACTTCC	760	<i>J Antimicrob Chemother</i> 2000; 46 : 703-711
<i>bla</i> _{OXA-2}	GCCAAAGGCACGATAGTTG GCGTCCGAGTTGACTGCCGG	701	<i>Antimicrob Agents Chemother</i> 2002; 46 : 3031-3034
<i>bla</i> _Z	ACTTCAACACCTGCTGCTTTC TGACCACTTTTATCAGCAACC	173	<i>Antimicrob Agents Chemother</i> 2000; 44 : 231-238
<i>cfxA/cfxA2</i>	CGTAGTTTTGAGTATAGCTTT GATGTTGCCTATATATGTC	802	<i>J Antimicrob Chemother</i> 2003; 51 : 1293-1296
<i>ampC</i>	ATAACCACCCAGTCACGC CAGTAGCGGAGACTGCGCA	630	<i>Clin Infect Dis</i> 2002; 35 : 140-145
<i>bla</i> _{SPM-1}	CCTACAATCTAACGGCGACC TCGCCGTGTCCAGGTATAAC	649	<i>J Antimicrob Chemother</i> 2003; 52 : 699-702
<i>cfiA</i>	TCCATGCTTTTCCCTGTCGAGTTAT GGGCTATGGCTTTGAAGTGC	683	<i>J Med Microbiol</i> 2004; 53 : 413-419
<i>tet(A)</i>	GCTACATCCTGCTTGCCTTC CATAGATCGCCGTGAAGAGG	210	<i>Mol Cell Probes</i> 2001; 15 : 209-215
<i>tet(B)</i>	TTGGTTAGGGGCAAGTTTG GTAATGGGCAATAACACCG	659	<i>Mol Cell Probes</i> 2001; 15 : 209-215
<i>tet(E)</i>	AAACCACATCCTCCATACGC AAA TAG GCC ACA ACC GTC AG	278	<i>Mol Cell Probes</i> 2001; 15 : 209-215
<i>tet(K)</i>	GTA GCG ACA ATA GGT AAT AGT GTA GTG ACA ATA AAC CTC CTA	360	<i>J Clin Microbiol</i> 2003; 41 : 4089-4094
<i>tet(L)</i>	TCG TTA GCG TGC TGT CAT TC GTA TCC CAC CAA TGT AGC CG	267	<i>Mol Cell Probes</i> 2001; 15 : 209-215
<i>tet(M)</i>	AGT GGA GCG ATT ACA GAA CAT ATG TCC TGG GGT GTC TA	158	<i>J Clin Microbiol</i> 2003; 41 : 4089-4094
<i>tet(O)</i>	AGC GTC AAA GGG GAA TCA CTA TCC CGG CGG GGT TGG CAA ATA	1723	<i>J Antimicrob Chemother</i> 2000; 45 : 763-770
<i>tet(Q)</i>	TTA TAC TTC CTC CGG CAT CG ATC GGT TCG AGA ATG TCC AC	904	<i>Mol Cell Probes</i> 2001; 15 : 209-215
<i>mrsA</i>	TCC AAT CAT AGC ACA AAA TC AAT TCC CTC TAT TTG GTG GT	163	<i>Jpn J Infect Dis</i> 2007; 60 : 183-187
<i>mecA</i>	GTA GAA ATG ACT GAA CGT CCG ATA A CCA ATT CCA CAT TGT TTC GGT CTA A	310	<i>J Clin Microbiol</i> 2004; 42 : 4947-4955
<i>mef</i>	AGT ATC ATT AAT CAC TAG TGC	348	<i>Jpn J Infect Dis</i>

	TTC TTC TGG TAC AAA AGT GG		2007; 60 : 183-187
<i>ereA</i>	AAC ACC CTG AAC CCA AGG GAC G CTT CAC ATC CGG ATT CGC TCG A	420	<i>Antimicrob Agents Chemother</i> 1996; 40 : 1817-1824
<i>ereB</i>	AGA AAT GGA GGT TCA TAC TTA CCA CAT ATA AAT CAT CAC CAA TGG CA	546	<i>Antimicrob Agents Chemother</i> 1996; 40 : 1817-1824
<i>mphA</i>	AAC TGT ACG CAC TTG C GGT ACT CTT CGT TAC C	837	<i>Antimicrob Agents Chemother</i> 1996; 40 : 1817-1824
<i>ermA</i>	AAG CGG TAA ACC CCT CTG A TTC GCA AAT CCC TTC TCA AC	190	<i>J Clin Microbiol</i> 2003; 41 : 4089-4094
<i>ermB</i>	CTA TCT GAT TGT TGA AGA AGG ATG AAA GTT TAC TCT TGG TTT AGG ATG AAA	142	<i>J Antimicrob Chemother</i> 2000; 46 : 527-534
<i>ermC</i>	AAT CGT CAA TTC CTG CAT GT TAA TCG TGG AAT ACG GGT TTG	299	<i>J Clin Microbiol</i> 2003; 41 : 4089-4094
<i>qnrB</i>	GAT CGT GAA AGC CAG AAA GG ATG AGC AAC GAT GCC TGG TA	476	<i>Antimicrob Agents Chemother</i> 2009; 53 : 639-645
<i>qnrS</i>	GCA AGT TCA TTG AAC AGG GT TCT AAA CCG TCG AGT TCG GCG	428	<i>Antimicrob Agents Chemother</i> 2009; 53 : 639-645
<i>sul1</i>	ATG GTG ACG GTG TTC GGC ATT CTG A CTA GGC ATG ATC TAA CCC TCG GTC T	815	<i>J Antimicrob Chemother</i> 2003; 52 : 1022-1024
<i>sul2</i>	CCT GTT TCG TCC GAC ACA GA GAA GCG CAG CCG CAA TTC AT	396	<i>Int J Antimicrob Agents</i> 2011; 37 : 230-234
<i>sul3</i>	GAG CAA GAT TTT TGG AAT CG CAT CTG CAG CTA ACC TAG GGC TTT GGA	396	<i>J Antimicrob Chemother</i> 2003; 52 : 1022-1024
<i>nim1</i>	ATG TTC AGA GAA ATG CGG CGT AAG CG GCT TCC TTG CCT GTC ATG TGC TC	458	<i>J Clin Microbiol</i> 1996; 34 : 2078-2084
<i>nim2</i>	ATG TTC AGA GAA ATG CGG CGT AAG CG GCT TCC TTG CCT GTC ATG TGC TC	458	<i>J Clin Microbiol</i> 1996; 34 : 2078-2084
<i>nim3</i>	ATG TTC AGA GAA ATG CGG CGT AAG CG GCT TCC TTG CCT GTC ATG TGC TC	458	<i>J Clin Microbiol</i> 1996; 34 : 2078-2084
<i>nim4</i>	ATG TTC AGA GAA ATG CGG CGT AAG CG GCT TCC TTG CCT GTC ATG TGC TC	458	<i>J Clin Microbiol</i> 1996; 34 : 2078-2084
<i>aacA-aphD</i>	TAA TCC AAG AGC AAT AAG GGC GCC ACA CTA TCA TAA CCA CTA	227	<i>J Clin Microbiol</i> 2003; 41 : 4089-4094
<i>vatA</i>	TGG TCC CGG AAC AAC ATT TAT TCC ACC GAC AAT AGA ATA GGG	268	<i>J Clin Microbiol</i> 2003; 41 : 4089-4094
<i>vatB</i>	GCT GCG AAT TCA GTT GTT ACA CTG ACC AAT CCC ACC ATT TTA	136	<i>J Clin Microbiol</i> 2003; 41 : 4089-4094
<i>vatC</i>	AAG GCC CCA ATC CAG AAG AA TCA ACG TTC TTT GTC ACA ACC	467	<i>J Clin Microbiol</i> 2003; 41 : 4089-4094
<i>vga</i>	CCG AAC TGC TAT TAG CAG A AAG TTC GTT TCT CTT TTC GA	470	<i>Antimicrob Agents Chemother</i> 1999; 43 : 1062-1066
<i>vgb</i>	ACT AAC CAA GAT ACA CAG GAC C TTA TTG CTT GTC AGC CTT CC	734	<i>Antimicrob Agents Chemother</i> 1999; 43 : 1062-1066
<i>linA</i>	GGT GGC TGG GGG GTA GAT GT GCT TCT TTT GAA ATA CAT GG	323	<i>Antimicrob Agents Chemother</i> 1996; 40 : 1817-1824
<i>mrsB</i>	TAT GAT ATC CAT AAT AAT TAT CCA ATC AAG TTTA TAT CAT GAA TAG ATT GTC CTG TT	334	<i>Antimicrob Agents Chemother</i> 1999; 43 : 1062-1066
<i>cepA</i>	TTT CTG CTA TGT CCT GCC C ATC TTT CAC GAA GAC GGC	743	<i>Clinics</i> 2011; 66 : 543-547
<i>mexB</i>	GTG TTC GGC TCG CAG TAC TC AAC CGT CGG GAT TGA CCT TG	244	<i>FEMS Microbiol Lett</i> 2005; 243 : 125-131
<i>mexD</i>	CGA GCG CTA TTC GCT GC CGA GCG CTA TTC GCT GC	165	<i>BMC Microbiol</i> 2010; 10 :217
<i>mexF</i>	GGC AGT TGC ACG TCG A CGC CTG GTC ACC GAG GAA GAG T	255	<i>Apmis</i> 2005; 113 : 187-196
<i>mexY</i>	TAG TCC ATG GCT TGC GGG AAG C CCG CTA CAA CGG CTA TCC CT	250	<i>FEMS Microbiol Lett</i> 2005; 243 : 125-131

Table S2. Sequence of oligonucleotide probes used for fluorescence in situ hybridization.

Probe	Target	Sequence (5' – 3')	Formamide	Reference
Bfrag998	<i>Bacteroides fragilis</i>	GTTTCCACATCATTCCACTG	30%	<i>Syst Appl Microbiol</i> 2003; 26 : 110-118
Bfra602	<i>Bacteroides fragilis</i> group	GAGCCGCAAACCTTCACAA	30%	<i>Appl Environ Microbiol</i> 1998; 64 : 3336
ECO1167	<i>Escherichia coli</i>	GCATAAGCGTCGCTGCCG	40%	<i>Syst Appl Microbiol</i> 1995; 18 : 113-122
Enc1259	<i>Enterococcus</i> spp.	GAAGTCGCGAGGCTAAGC	35%	<i>Syst Appl Microbiol</i> 2000; 23 : 563-572
FUS664	<i>Fusobacterium</i> sp.	CTTGTAAGTTCCGCTACCTC	40%	<i>Eur J Oral Sci</i> 2004; 112 : 33-41
PINT649	<i>Prevotella intermedia</i>	GCCGCCRCTGAASTCAGGCC	40%	<i>Microbiology</i> 2002; 148 : 1379-1387
PNG675	<i>Prevotella nigrescens</i>	TCCGCTGCGCTGCGTGTA	40%	<i>Microbiology</i> 2002; 148 : 1379-1387
Pae997	<i>Pseudomonas</i> sp.	TCTGGAAAGTTCTCAGCA	35%	<i>Syst Appl Microbiol</i> 1995; 18 : 113-122
KO218	<i>Staphylococcus</i> sp.	GAAGCAAGCTTCTCG TCCG	20%	<i>J Microbiol Methods</i> 2005; 62 : 37-56
Str	<i>Streptococcus</i> spp.	CACTCTCCCCTTCTGCAC	30%	<i>Med Microbiol Immunol</i> 2000; 188 : 169-175
ACA652	<i>Acinetobacter</i> spp.	ATCCTCTCCATACTCTA	35%	<i>Appl Environ Microbiol</i> 1994; 60 : 792-800

Table S3. Anthropometric and nutritional characteristics of the participants.

Characteristics (mean \pm SD)	Groups of individuals			p < 0.05*
	Eutrophic (n = 24)	Overweight (n = 24)	Obese (n = 24)	
Gender (male/female)	05/19	12/12	09/15	
Average age (years \pm SD)	37.91 \pm 12	38.12 \pm 13.38	42.79 \pm 11.67	
Average Body Mass Index	22.81 \pm 01.8	27.05 \pm 01.3	36.92 \pm 06.0	a,b,c
Abdominal circumference	88.05 \pm 7.4	94.65 \pm 5.5	114.98 \pm 15.3	a,b,c
Waist circumference	80.95 \pm 06.7	88.70 \pm 4.5	111.99 \pm 16.6	a,b,c
Hip circumference	99.60 \pm 04.5	105.40 \pm 4.30	117.45 \pm 08.6	a,b,c
Waist-hip ratio	0.81 \pm 0.55	0.84 \pm 0.52	0.97 \pm 0.12	a,b,c
Mean daily calorie intake (kcal)	1 891.58 \pm 679	2 018.79 \pm 845	2 191.33 \pm 1,049	c
Mean daily carbohydrate intake (%)	53.60 \pm 9.10	55.02 \pm 7.78	57.43 \pm 8.02	c
Mean daily lipids intake (%)	27.27 \pm 8.79	29.87 \pm 5.92	28.74 \pm 5.60	-
Mean daily protein intake (%)	19.13 \pm 4.30	15.11 \pm 4.54	13.83 \pm 3.27	-
Mean daily fibers intake (g)	23.75 \pm 8.30	25.03 \pm 13.30	30.49 \pm 5.42	b,c

* Significant statistical analysis: *a*—comparison between eutrophic and overweight volunteers' values; *b*—comparison between overweight and obese volunteers' values; *c*—comparison between eutrophic and obese volunteers' values. SD = Standard Deviation

Table S4. Declaration of habitual intake of xenobiotic, other than antimicrobial drugs, as reported by the participants.

Xenobiotics	Habitual intake (%)		
	Eutrophic (n=24)	Overweight (n=24)	Obese (n= 24)
Antihypertensive	4.2	12.5	79.2
Antacids	0	0	8.4
Anti-inflammatories	0	4.2	8.4
Diuretic	0	0	4.2
Barbiturates	0	0	4.2
Antidepressant	0	0	4.2
Hormone Drugs (Tamoxifen)	0	4.2	0
Contraceptional	0	4.2	0
	Whey protein	4.2	0
	Glucosamine Sulfate	4.2	0
Nutritional Supplements	Chondroitin sulfate	4.2	0
	Others	8.4	4.2
	Sucralose and Acesulfame K	8.4	8.4
	Stevioside and cyclamate-saccharin	0	4.2
Artificial sweeteners	cyclamate-saccharin	4.2	8.4
	Others	0	0
Indeterminate		0	4.2