Supplemental Material

Cleaning and disinfection of biofilms composed of Listeria monocytogenes and background microbiota from meat processing surfaces

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| | max growth rate (days ⁻¹) | OD ₆₀₀ in stationary phase |
|-------------------------|---------------------------------------|---------------------------------------|
| A. johnsonii MF4640 | 7.6 | 1.2 |
| A. johnsonii MF4642 | 8.1 | 1.3 |
| C. sputi MF4643 | 1.3 | 1.0 |
| Corynebacterium MF4645 | 3.4 | 1.6 |
| Epilithonimonas MF6392 | 4.8 | 2.0 |
| K. rhizophila MF6395 | 2.6 | 2.0 |
| Kocuria MF4644 | 1.8 | 0.1 ^{<i>a</i>} |
| Microbacterium MF4634 | 3.3 | 2.3 |
| Micrococcus MF6369 | 1.3 | 2.0 |
| P. fluorescens MF6394 | 11.0 | 2.1 |
| P. mandelii MF4836 | 9.2 | 2.0 |
| P. putida MF6396 | 6.8 | 2.0 |
| Psychrobacter MF4641 | 3.8 | 1.5 |
| R. erythropolis MF4633 | 4.3 | 2.0 |
| R. fascians MF4637 | 3.6 | 2.0 |
| Sphingomonas MF4632 | 1.1 | 0.4 ^{<i>a</i>} |
| L. monocytogenes MF4536 | 4.5 | 1.0 |
| L. monocytogenes MF5376 | 4.6 | 1.0 |
| L. monocytogenes MF5377 | 4.5 | 1.0 |
| L. monocytogenes MF5634 | 4.5 | 1.1 |
| L. monocytogenes MF4565 | 4.6 | 1.1 |
| L. monocytogenes MF5378 | 4.4 | 1.1 |
| L. monocytogenes MF5630 | 4.5 | 1.0 |

Table S1: Maximal growth rates and OD_{600} values obtained from growth curves

^{*a*} The strain did not reach stationary phase in 6 days. The value given is the OD_{600} reached after six days of growth.

| Polysaccharide Psl | | | | | |
|--------------------|---------------|-----------------------------|--------------|--------------|--|
| Query ge | ne/locus tag | MF4836 | MF6394 | MF6396 | |
| psIA | PA2231 | - | MF6394_31135 | - | |
| psIB | PA2232 | MF4836_12955 | MF6394_31140 | MF6396_02060 | |
| psIC | PA2233 | - | MF6394_31145 | - | |
| psID | PA2234 | - | MF6394_31150 | - | |
| psIE | PA2235 | - | MF6394_31155 | - | |
| psIF | PA2236 | - | MF6394_31160 | - | |
| pslG | PA2237 | - | MF6394 31165 | - | |
| psIH | PA2238 | - | MF6394 31170 | MF6396 02055 | |
| psll | PA2239 | - | MF6394 31175 | - | |
| psIJ | PA2240 | - | MF6394 31180 | - | |
| pslK | PA2241 | - | MF6394 31190 | - | |
| psIL | PA2242 | - | - | - | |
| psIM | PA2243 | MF4836 20005 | - | MF6396 25180 | |
| , psIN | PA2244 | MF4836 27720 | MF6394 16270 | MF6396 25885 | |
| Polysacchari | de Pel | — | — | — | |
| Query gei | ne/locus tag | MF4836 | MF6394 | MF6396 | |
| pelA | PA3064 | MF4836 15930 | - | - | |
| , pelB | PA3063 | MF4836 15935 | - | - | |
| , pelC | PA3062 | MF4836 15940 | - | - | |
| , pelD | PA3061 | MF4836 15945 | - | - | |
| , pelE | PA3060 | MF4836 15950 | - | - | |
| , pelF | PA3059 | MF4836 15955 | - | - | |
| , pelG | PA3058 | MF4836 15960 | - | - | |
| Aggregative | polysaccharic | le cellulose <i>, wss</i> o | peron | | |
| Que | ry gene | MF4836 | MF6394 | MF6396 | |
| wssB | - | - | - | MF6396_10305 | |
| wssC | - | - | - | MF6396_10310 | |
| wssD | - | - | - | MF6396_10315 | |
| wssE | - | - | - | MF6396_10320 | |
| wssF | - | - | - | MF6396_10325 | |
| wssG | - | - | - | MF6396_10330 | |
| wssH | - | MF4836_08185 | MF6394_04460 | MF6396_10335 | |
| wssl | - | - | - | MF6396_10340 | |
| Capsular pol | ysaccharide a | lginate | | | |
| Query ge | ne/locus tag | MF4836 | MF6394 | MF6396 | |
| algD | PA3540 | MF4836_08230 | MF6394_04505 | MF6396_00635 | |
| alg8 | PA3541 | MF4836_08225 | MF6394_04500 | MF6396_00630 | |
| alg44 | PA3542 | MF4836_08215 | MF6394_04490 | MF6396_00625 | |
| algK | PA3543 | MF4836_08210 | MF6394_04485 | MF6396_00620 | |
| algE | PA3544 | MF4836_08205 | MF6394_04480 | MF6396_00615 | |
| algG | PA3545 | MF4836_08200 | MF6394_04475 | MF6396_00610 | |
| algX | PA3546 | MF4836_08195 | MF6394_04470 | MF6396_00605 | |
| algL | PA3547 | MF4836_08190 | MF6394_04465 | MF6396_00600 | |
| algi | PA3548 | MF4836_08185 | MF6394_04460 | MF6396_00595 | |
| algJ | PA3549 | MF4836_08180 | MF6394_04455 | MF6396_00590 | |
| algF | PA3550 | | MF6394_04450 | MF6396_00585 | |
| algA | PA3551 | MF4836_08170 | MF6394_04445 | MF6396_00580 | |
| LapA adhesi | n | | | | |
| Query ge | ne/locus tag | MF4836 | MF6394 | MF6396 | |
| lapA | PP0168 | MF4836_17645 | MF6394_18190 | MF6396_24900 | |
| lapB | PP0167 | | MF6394_18180 | MF6396_22540 | |
| lapC | PP0166 | MF4836 17630 | MF6394 18175 | MF6396 22545 | |
| lapD | PP0165 | MF4836_17655 | MF6394_32135 | MF6396_24100 | |
| lapG | PP0164 | MF4836_17660 | MF6394_32130 | MF6396_24095 | |
| · · · | | | | _ | |

Table S2: Putative biofilm-associated genes identified in *Pseudomomonas* sp. strains^a

^a The gene producing the highest-scoring alignment i each BLASTsearch is listed, and all matches with E-values <10⁻⁹ were included in the table.

| Strain | control log ₁₀ CFU ml ⁻¹ | log ₁₀ reductions; 1% Alkalifoam | log10 reductions; 1% DesQA | log ₁₀ reductions; 1.5% Diverfoam | |
|----------------------------|--|---|----------------------------|--|--|
| A. johnsonii MF4640 | 7.1 7.0 4.9 6.9 | 5.1 >5.0 2.3 >4.9 | >5.1 4.4 >2.9 >4.9 | >5.1 >5.0 2.9 >4.9 | |
| A. johnsonii sp. MF4642 | 6.8 6.7 6.8 | >4.8 >4.7 >4.8 | >4.8 4.2 >4.8 | >4.8 4.7 >4.8 | |
| C. sputi MF4643 | 7.0 7.0 7.0 | 1.6 1.1 1.2 | 5.0 >5.0 >5.0 | >5.0 >5.0 >5.0 | |
| Corynebacterium sp. MF4645 | 7.1 6.9 7.0 | 1.5 1.3 1.6 | 5.1 >4.9 >5.0 | >5.1 >4.9 >5.0 | |
| Epilithonimonas sp. MF6392 | 6.6 5.4 5.1 | >4.6 >3.4 3.1 | >4.6 >3.4 >3.1 | >4.6 >3.4 >3.1 | |
| Kocuria sp. MF4644 | 7.2 7.2 7.2 | 3.5 4.4 3.0 | 5.2 >5.2 >5.2 | >5.2 >5.2 >5.2 | |
| Kocuria rhizophila MF6395 | 7.0 6.7 6.3 | 3.8 >4.7 3.7 | 4.3 >4.7 >4.3 | <5.0 >4.7 >4.3 | |
| Microbacterium sp. MF4634 | 7.0 6.9 6.9 | >5.0 >4.9 >4.9 | >5.0 >4.9 >4.9 | 4.5 >4.9 >4.9 | |
| Micrococcus sp. MF6393 | 6.9 6.6 6.6 | 1.8 1.7 1.6 | >4.9 >4.6 >4.6 | >4.9 >4.6 >4.6 | |
| P. putida MF6396 | 7.2 7.2 6.9 | 3.7 3.1 4.9 | >5.2 >5.2 >4.9 | >5.2 >5.2 >4.9 | |
| P. fluorescens MF6394 | 7.1 7.0 7.0 | >5.1 >5.0 4.7 | >5.1 5.0 >5.0 | >5.1 >5.0 >5.0 | |
| P. mandelii MF4836 | 7.4 7.4 7.3 7.0 | >5.4 3.4 >5.3 >5.0 | 5.4 3.7 >5.3 >5.0 | >5.4 3.9 >5.3 >5.0 | |
| Psychrobacter sp. MF4641 | 4.6 7.3 5.2 6.4 | ? 3.5 >3.2 >4.4 | ? >5.3 >3.2 >4.4 | ? >5.3 >3.2 >4.4 | |
| R. erythropolis MF4633 | 7.3 7.1 7.0 7.3 | 5.3 >5.1 4.5 >5.3 | ? >5.1 >5.0 >5.3 | 5.3 >5.1 >5.0 >5.3 | |
| R. fascians MF4637 | ~7.0 6.8 7.6 | >5.0 >4.8 >5.6 | >5.0 >4.8 >5.6 | >5.0 >4.8 >5.6 | |
| Sphingomonas sp. MF4632 | - 6.9 6.6 6.5 | - 4.9 >4.6 3.7 | - 3.6 >4.6 >4.5 | - >4.9 >4.6 >4.5 | |
| L. monocytogenes MF4536 | 7.2 7.0 7.1 | >5.2 >5.0 >5.1 | >5.2 >5.0 >5.1 | >5.2 >5.0 >5.1 | |
| L. monocytogenes MF5376 | 7.2 7.2 7.1 | 5.2 >5.2 3.6 | >5.2 >5.2 >5.1 | >5.2 >5.2 4.4 | |
| L. monocytogenes MF5634 | 7.2 7.1 7.3 | 5.2 >5.1 >5.3 | 3.8 >5.1 >5.3 | >5.2 >5.1 >5.3 | |
| L. monocytogenes MF5377 | 7.2 7.2 7.2 | 4.6 >5.2 >5.2 | >5.2 >5.2 >5.2 | >5.2 >5.2 >5.2 | |
| L. monocytogenes MF4565 | 7.4 7.2 7.3 | >5.4 >5.2 4.6 | >5.4 >5.2 >5.3 | >5.4 >5.2 >5.3 | |
| L. monocytogenes MF5630 | 7.1 7.1 7.1 7.0 | >5.1 >5.1 3.3 >5.0 | >5.1 >5.1 3.4 >5.0 | >5.1 >5.1 3.2 >5.0 | |
| L. monocytogenes MF5378 | 7.3 7.1 7.3 7.1 | >5.3 >5.1 3.3 5.1 | >5.3 >5.1 ~3.3 >5.1 | >5.3 >5.1 ~3.3 >5.1 | |

Table S3: Bactericidal suspension test results

| | | Before C&D | | After | C&D |
|---------------------------|-------|------------------|--------|--------|--------|
| Front of coupon | | H ₂ O | QAC | QAC | ΡΑΑ |
| Multigenera biofilms | Day 4 | 5 (21) | NA | 5 (20) | 3 (15) |
| | Day 7 | 5 (15) | 5 (15) | 5 (15) | NT |
| L. monocytogenes biofilms | Day 4 | 5 (22) | NA | 1 (5) | 1 (5) |
| | Day 7 | 5 (15) | NT | NT | NT |
| Back of coupon | | | | | |
| Multigenera biofilms | Day 4 | 3 (15) | NA | 3 (10) | 1 (3) |
| | Day 7 | 5 (15) | 5 (15) | 5 (15) | NT |
| L. monocytogenes biofilms | Day 4 | 3 (11) | NA | 2 (6) | NT |
| | Day 7 | 5 (15) | 5 (15) | 2 (6) | NT |

Table S4: Number of conveyor belt coupons subjected to CLSM imaging^{*a*}

^a The total number of Z-scans acquired for each set of coupons is given in parenthesis. NA: not applicable. NT: not tested

Table S5: GenBank accessions for publicly available sequences used in phylogenetic analyses

| unless strain name is listed) 165 rRNA gyrB rpoB rpoB rpoB rpoB Pseudomonsa eurginosa HE978271 Al533104 Al717442 A033907 P. alkylphenolio KL28 FN554152 FN5544752 FN554450 CP009048 P. arsenicoxydans FN654513 HE800469 HE800503 HE800488 CP007944 P. autoformons D840012 AB039401 Al717454 RN554432 FN554461 P. corrupata D84012 AB039400 Al717448 A8039566 FN554421 P. cortoprimos AB060137 FN554181 AJ717451 FN554462 AJIP00000000 P. entomophila AY907566 AY907567 FC554263 CP03941 P. fluorescens AS06 B4013 D86016 AJ71451 A8039545 P. fluorescens P144 AF094733 FN554482 AV17444 FN554466 P. fluorescens P144 AF094733 FN554486 AV171451 A8039545 P. frederiksbergensis AL293282 AM084076 AV171454 FN554486 | Strain (type strain of the species | s Accession numbers for sequences used in phylogenetic analysis | | | | |
|--|------------------------------------|---|-----------|------------|-----------|--------------|
| Pseudomonos aeruginosa HE978271 Al633104 AV171442 A803907 P. ardisplaenolis K123 F CP009048 P. antarctica A1537601 FN554150 FN554727 FN554450 P. arsenicoxydans FN645213 HE800469 HE800503 HE800488 P. aureofaciens AN50988 FN554127 AN039566 P. cortugata D84009 A8039410 AV171474 A8039566 P. cortugata D840012 AB034460 A171474 A8039566 P. cortugata D840013 FN554181 AV171474 AN039566 P. cortugata A900756 A907567 C CT573326 P. extremoricentolis AF405328 FN554136 AV17474 AN39545 P. fluorescens FV14 C C CP012830 CP012830 P. fluorescens FV14 FN54444 FN554468 CP012830 CP012830 P. fluorescens FV14 FN54446 AV171444 FN554468 CP012830 P. fluorescens FV14 FN54448 FN554188 AV17145 | unless strain name is listed) | 16S rRNA | gyrB | гроВ | rpoD | WGS |
| P. altylphenola KL28 CP009048 P. antarctica AIS37601 FNS54120 FNS54270 FNS54270 P. arsenicoxydans FN654213 HE800469 HE800483 FNS54271 P. arsenicoxydans FN564217 AV171426 FNS54432 FNS54433 P. carotoformans D840012 AB039401 AV171474 AB039566 P. corrupata D84012 AB039411 AV171474 AB039566 P. corrupata AB00137 FNS54181 AV171476 FNS54463 P. antonphila AY907566 AY90757 CT573326 FNS54432 P. fuorescens D84013 D86016 AV171451 A8039545 P. fuorescens FN306 CP003041 FN54472 CP012380 CP012380 P. fuorescens FV300-NZE3 CP012381 AV171444 FNS54462 CP01296 P. fraderiksbergensis A126431 GO96725 HS57470 CP01296 P. fraderiksbergensis A126621 GO996725 HS57470 CP01296 P. grimontii A7268021 GO974725 <td>Pseudomonas aeruginosa</td> <td>HE978271</td> <td>AJ633104</td> <td>AJ717442</td> <td>AB039607</td> <td></td> | Pseudomonas aeruginosa | HE978271 | AJ633104 | AJ717442 | AB039607 | |
| P. attractica AJ37601 FN554169 FN554272 FN554450 P. arsenicoxydans FN65213 HE80048 HE80048 FN554472 AJ717426 FN554453 P. aureofaciens AY509898 FN554172 AJ717476 FN554453 FN554453 P. aureofaciens D84009 AB039460 AR039366 FN554462 FN554462 P. corrugata D840013 FN554180 FN554462 FN554462 FN554462 P. donghuensis F FN554452 FN554454 AJJP00000000 FN554454 P. durorscens D84013 D86016 AJ717451 A8039545 FN54732 P. fluorescens AS05 E CP002041 CP012830 CP002840 P. fluorescens P114 FN54464 AJ717451 A8039586 CP012830 P. fluorescens P14 FN54464 AJ717454 AM034335 FN554464 P. fluorescens P14 FN554184 AJ717444 FN554467 CP012830 P. fluor A8006163 AJ717454 AM039386 FN554470 FN554470 <td>P. alkylphenolia KL28</td> <td></td> <td></td> <td></td> <td></td> <td>CP009048</td> | P. alkylphenolia KL28 | | | | | CP009048 |
| P. arcsenicoxydans FN645213 HE800469 HE800488 P. arctoforians D84009 AB039411 AJ717487 AB039567 P. arctoformans D84012 AB03460 AJ717487 AB039566 P. costantinii AF374472 FN554181 AJ717475 FN554451 P. compricioarato AB000137 FN554181 AJ717476 FN554461 P. donghuensis P CT573326 CT573326 P. entomophila AY907566 AJ907567 CT573326 P. fuorescens D84013 D86016 AJ717451 AB039545 P. fluorescens S066 CP012830 CP012830 CP012830 P. fluorescens FN14 FN554184 AJ717465 AM084335 CP012830 P. frederiksbergensis AJ249328 AM084676 AJ717465 AM084335 CP012830 P. gramontii AF094733 FN554186 AJ717465 AM084335 CP012830 P. frederiksbergensis AA204382 AM084705 AJ717465 AM084335 CP P. gerimontii | P. antarctica | AJ537601 | FN554169 | FN554727 | FN554450 | |
| P. aurelgaciens AY509898 FNS54122 AY17426 FNS54453 P. aurotoformans D84012 AB039460 AV171487 AB039566 P. corrugata D84012 AB039460 AV171487 AB039566 P. corrugata D84012 AB03460 AV171487 FNS54461 P. cremoricolorota AB060137 FNS54181 AV171476 FNS54464 P. dromophila AV907566 AV907567 CT573326 P. P. extremorientalis AF405328 FNS54182 FNS54464 CT003041 P. fluorescens D84013 D86016 AV17451 AB039545 CP003041 P. fluorescens FN300 P. fluorescens FN300 CP012830 CP012830 CP012830 P. fluorescens FN30 AL243982 AM084676 AV17445 FNS54466 CP017296 P. fluor AB060136 AB033935 AV171438 FNS54470 FN554186 P. fluora AB050136 AB034518 AV17438 FNS54476 FNS54476 P. fluora AB060136 AB039395 | P. arsenicoxydans | FN645213 | HE800469 | HE800503 | HE800488 | |
| P. actolformans D84009 AB039411 AJ717458 AB039547 P. corrugato D84012 AB039460 AJ713478 AB039566 P. costantinii AF374472 FN554181 AJ717476 FN554461 P. compinensis N 117451 FN554464 AJP00000000 P. extremorientalis AF405328 FN554182 FN554464 CP003041 P. fluorescens FV300-N2E3 C CP012830 CP012830 P. fluorescens FV300-N2E3 C CP012830 CP012296 P. fragil AF094733 FN554184 AJ717465 AM084335 P. fuorescens FV300-N2E3 C CP012830 CP012296 P. fragil AF094733 FN554184 AJ717445 AM084335 P. fubrescens FV300-N2E3 AJ717455 AM084335 FN554186 AJ717465 AM084336 P. fragil AF094733 FN554184 AJ717455 AM084335 FN554195 P. gradini AF05484 FN554185 AJ717456 AM084336 FN554195 P. gradini <td>P. aureofaciens</td> <td>AY509898</td> <td>FN554172</td> <td>AJ717426</td> <td>FN554453</td> <td></td> | P. aureofaciens | AY509898 | FN554172 | AJ717426 | FN554453 | |
| P. corrugata D84012 AB039460 A/171487 AB039566 P. costantinii AF374472 FN554181 FN554461 P. P. cormoricolorata AB060137 FN554181 A/17476 FN554462 P. atomophila AY907566 AY907567 CT573326 CT573326 P. extremorientalis AF405328 FN554182 FN554733 FN554464 P. fluorescens D84013 D86016 A/17431 A8039456 P. fluorescens FW300-N2E3 CP012830 CP012830 P. P. fluorescens FW300-N2E3 CP012836 CP012836 CP012830 P. fluorescens FW300-N2E3 CP012836 A/171444 FN554466 CP012830 P. fluorescens FW300-N2E3 AF024384 A/171438 FN554466 CP012830 P. fluorescens FW300-N2E3 AF024382 A/084076 A/171438 FN554466 P. fluorescens FW300-N2E3 AF024384 A/171438 FN554466 FN554477 P. fluore AF074384 FN554186 A/171439 FN554477 FN554477 | P. azotoformans | D84009 | AB039411 | AJ717458 | AB039547 | |
| P. costantinii AF374472 FNS54180 FNS54732 FNS54461 P. cremoricolorata AB060137 FNS54181 AJ17476 FNS54462 P. P. donghuensis N N907566 N907567 C1573326 P. P. extremorientalis A400328 FNS54181 AJ17451 AB039545 P. fluorescens AS06 CP003041 CP012830 CP003041 P. fluorescens FV300-N2E3 CP012830 CP012830 CP012830 P. fluorescens FV300-N2E3 CP012830 CP012830 CP012830 P. fluorescens P114 CP012830 CP012830 CP01296 P. frederikbergensis A429382 AM08476 AJ717465 AM084335 P. gesardti AF074384 FN554188 AJ717439 FN554468 P. P. genonica AB126621 GQ996725 HES77705 FN554482 P. P. ibnensis AF074584 FN554196 AJ717436 FN554480 P. P. imaginalis Z7663 AB039448 AJ717456 FN554477 P. | P. corrugata | D84012 | AB039460 | AJ717487 | AB039566 | |
| P. cremoricalorata AB060137 FNS54181 AJ717476 FNS54462 P. donghuensis AU9000000 AU9000000 CT573326 CT573326 P. entomophila AY907566 AV907567 FNS54464 CT573326 P. fuorescens D84013 D86016 AJ71751 AB039545 CP003041 P. fluorescens FW300-N2E3 P. fuorescens P14 CP012830 CP012830 P. fuorescens P14 CP012830 P. fragi AF094733 FNS54184 AJ717444 FNS54466 CP012830 P. fragi AF074384 FNS54186 AJ717435 FNS54468 P. fava P. gessardii AF074384 FNS54186 AJ717438 FNS54470 P. fava P. inini AF057645 FNS54196 AJ717455 FNS54470 P. fuorescens/s14 P. Sava | P. costantinii | AF374472 | FN554180 | FN554732 | FN554461 | |
| P. entomophila Av90756 Av907567 CT573326 P. extremorientalis AF405328 FN554182 FN554733 FN554464 P. fluorescens D84013 D86016 Al717451 A8039545 CP0030411 P. fluorescens AS06 P. fluorescens AS06 CP012830 CP012830 CP012830 P. fluorescens FN14 CP012834 AN084676 Al717455 AM084335 CP012966 P. fragi AF094733 FNS54184 Al717445 AM034335 P. CP012866 P. fragi AF074384 FNS54186 Al717455 AM084335 FNS54468 P. P. Sexordii AF074384 FNS54186 Al717455 AM034335 FNS54470 P. P. gesordii AF057645 FNS54186 Al717457 FNS54470 P. FNS P. Inin AY035996 FNS54196 Al717456 FNS54478 FNS54478 FNS54478 FNS54486 P. P. Intera AY035945 FNS54198 FNS54481 Al717456 FNS54486 P. FNS5 | P. cremoricolorata | AB060137 | FN554181 | AJ717476 | FN554462 | |
| P. extremorientalis AY907566 CT573326 P. extremorientalis AF405328 FN554182 FN554733 FN55464 P. fluorescens D84013 D86016 A717451 A8039545 CP003041 P. fluorescens AS06 CP012830 CP012830 CP012830 P. fluorescens P144 FN554184 AJ717451 A8039545 CP012830 P. fraderiksbergensis AJ249382 AM084676 AJ717454 FN554468 CP012830 P. gridonati AF074384 FN554188 AJ717451 A8039586 P. P. grimontii AF026802 FN554188 AJ717439 FN554488 PN554784 P. grimontii AF026802 FN554188 AJ717451 FN554470 P. P. lini AY036956 FN554196 AJ717456 FN554470 P. P. lini AY0364537 FN554196 AJ717456 FN554478 P. P. india AF052845 FN554196 AJ717456 FN554480 P. P. mareginalis AF0545207 | P. donghuensis | | | | | AJJP00000000 |
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| P. fragi AF094733 FN554184 A1717444 FN554466 P. P. frederiksbergensis A1249382 AM084676 AJ717445 FM554466 P. P. frederiksbergensis A1249382 AM084676 AJ717441 FN554466 P. P. gessardii AF074384 FN554186 AJ717438 FN554468 P. P. gimontii AF268029 FN554186 AJ717438 FN554470 P. P. japonica A8126621 GQ996725 HE577800 HE577795 P. P. linia AY035996 FN554198 AJ717454 FN554480 P. P. marginalis Z76663 AB039478 AJ717454 FN554480 P. marginalis Z76663 AB039478 AJ714745 FN554482 P. morginalis Z76663 RN554200 AJ717445 FN554482 P. morginalis Z76663 RN554205 AJ717455 FN554488 P. morginalis AF064457 FN554205 AJ717455 FN554491 P. orientalis AF064457 <td>P. fluorescens FW300-N2E3</td> <td></td> <td></td> <td></td> <td></td> <td>CP012830</td> | P. fluorescens FW300-N2E3 | | | | | CP012830 |
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| P. gimontii AF268029 FNS54188 AJ717439 FNS54470 P. japonica AB126621 GQ996725 HE5777800 HE577795 P. libanensis AF057645 FNS54195 AJ717454 FNS54477 P. lini AY035996 FNS54196 AJ717466 FNS54478 P. lini AY035996 FNS54198 FNS54480 P. mandelli AF058286 FNS54200 AJ717435 FNS54482 P. marginalis Z76663 AB039448 AJ717425 AB039575 P. migulae AF074383 FNS54200 AJ717446 FNS54488 P. montellii AF064458 FNS54203 AJ717455 FNS54488 P. mortellia AF064457 FNS54203 AJ717445 FNS54491 P. orientalis AF064457 FNS54218 AJ717456 FNS54497 P. parofulva AB060132 FNS54218 AJ717456 FNS54500 P. protoglossicida AB099457 FNS54214 CP003190 P. protegens AJ278812 HE800514 CP003190 <td>P. gessardii</td> <td>AF074384</td> <td>FN554186</td> <td>AJ717438</td> <td>FN554468</td> <td></td> | P. gessardii | AF074384 | FN554186 | AJ717438 | FN554468 | |
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| P. lini AY035996 FN554196 A/1717466 FN55478 P. lutea AY364537 FN554198 FN554738 FN554480 P. marginalis AF058286 FN554200 A/1717435 FN554482 P. marginalis Z76663 AB039448 A/171745 FN554482 P. marginalis Z76663 AB039448 A/171745 FN554486 P. mortellii AF074383 FN554204 A/171745 FN554488 P. mortellii AF064457 FN554207 A/171745 FN554491 P. nortellii AF064457 FN554203 A/1717434 FN554493 P. parofulva AB060132 FN554213 FN554500 P. P. parofulva AB060457 FN554218 A/171741 FN554503 P. parofulva AB009457 FN554218 A/171745 FN554503 P. parofulva AB009457 FN554218 A/171471 FN554503 P. portegens AJ278812 HE800514 CP003190 P. protegens AJ278812 HE800514 | P. libanensis | AF057645 | FN554195 | AJ717454 | FN554477 | |
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| P. poae AJ492829 FN554219 FN554751 FN554504 P. protegens AJ278812 HE800482 HE800514 CP003190 P. putida D84020 AB039451 AB039581 AP013070 P. putida D84020 AB039451 AB039581 AP013070 P. nbicosphaerae AY152673 FN554224 FN554755 FN554511 P. rhizosphaerae AF064459 FN554225 AJ717431 FN554511 P. synxantha D84025 AB039415 AJ717420 AB03950 P. syningae DQ318866 AB039428 FN554759 AB039516 P. trivialis AF25536 AB039423 AJ717467 AB039561 P. trivialis AJ492831 FN554230 FN554752 FN554515 P. veronii AF064460 FN554233 AJ717445 FN554518 P. vranovensis AY970951 HE577791 HE577793 CP000934 Acinetobacter johnsonii A AP970000000 ApP100000000 A. schindleri APP700000000 | P. plecoglossicida | AB009457 | FN554218 | AJ717456 | FN554503 | |
| P. protegens AJ278812 HE800482 HE800514 CCP003190 P. putida D84020 AB039451 AB03951 AB03951 AP013070 P. rhizosphaerae AY152673 FN554224 FN554755 FN554511 P P. rhodesiae AF064459 FN554225 AJ717431 FN554511 P P. synxantha D84025 AB039415 AJ717420 AB03950 P P. syringae DQ318866 AB039428 FN554759 AB039516 P P. tolaasii AF255336 AB039423 AJ717467 AB039561 P P. trivialis AJ492831 FN554230 FN554752 FN554518 P. vranovensis AY970951 HE577791 HE577793 CP000934 Cellvibrio japonicus Ueda107 APP100000000 ApPQ00000000 A. schindleri APP70000000 ApPT00000000 A. schindleri APP20000000 A. bouvetii APP20000000 A. bouvetii <td>P. poae</td> <td>AJ492829</td> <td>FN554219</td> <td>FN554751</td> <td>FN554504</td> <td>00000100</td> | P. poae | AJ492829 | FN554219 | FN554751 | FN554504 | 00000100 |
| P. puttad D84020 AB039451 AB039581 AP013070 P. rhizosphaerae AY152673 FN554224 FN554755 FN554510 P. rhodesiae AF064459 FN554225 AJ717431 FN554511 P. synxantha D84025 AB039415 AJ717420 AB039550 P. syringae DQ318866 AB039428 FN554759 AB039516 P. tolaasii AF255336 AB039423 AJ717467 AB039561 P. trivialis AJ492831 FN554230 FN554762 FN554515 P. veronii AF064460 FN554233 AJ717445 FN554518 P. vranovensis AY970951 HE577791 HE577793 CP000934 Acinetobacter johnsonii APP000000000 ApPQ00000000 ApPQ00000000 A. schindleri APP100000000 ApP00000000 ApP00000000 A. towneri APP200000000 ApPQ00000000 ApPG0000000 A. bouvetii APA00000000 APRG0000000 APRG00000000 A. indicus APRG00000000 AVET000000000 AV | P. protegens | AJ278812 | HE800482 | HE800514 | 4 5020504 | CP003190 |
| P. rhizosphaerde AY152673 FNS54224 FNS54755 FNS54510 P. rhodesiae AF064459 FNS54225 AJ717431 FNS54511 P. synxantha D84025 AB039415 AJ717420 AB039550 P. synxantha DQ318866 AB039428 FN554759 AB039516 P. syringae DQ318866 AB039423 AJ717467 AB039561 P. tolaasii AF255336 AB039423 AJ717467 AB039561 P. trivialis AJ492831 FN554230 FN554762 FN554515 P. veronii AF064460 FN554233 AJ717445 FN554518 P. vranovensis AY970951 HE577791 HE577793 CP000934 Acinetobacter johnsonii APP0N0000000 ApPQ00000000 ApPQ00000000 ApPPQ00000000 A. schindleri APP1000000000 ApPT000000000 ApPP200000000 ApPQ00000000 A. baumannii APP200000000 ApPG00000000 ApPG00000000 ApPG00000000 A. bouvetii APPG00000000 ApPG00000000 APPG00000000 APE0 | P. putida | D84020 | AB039451 | | AB039581 | AP013070 |
| P. modeside AF064459 FNS34225 AJ717431 FNS54511 P. synxantha D84025 AB039415 AJ717420 AB039550 P. synxantha DQ318866 AB039428 FN554759 AB039516 P. tolaasii AF255336 AB039423 AJ717467 AB039561 P. trivialis AJ492831 FN554230 FN554762 FN554515 P. veronii AF064460 FN554233 AJ717445 FN554518 P. vranovensis AY970951 HE577791 HE577799 HE577793 Cellvibrio japonicus Ueda107 APON00000000 A. schindleri APPQ00000000 A. schindleri A. towneri APPT00000000 A. bouvetii APP200000000 A. bouvetii A. baumannii APRG0000000 A. indicus APRG0000000 A. YET00000000 A. indicus APRG0000000 A. YET00000000 | P. mizosphäerde | AY152673 | FIN554224 | FIN554755 | FN554510 | |
| P. synkalitina D84025 Ab039415 A7/17420 Ab039530 P. syringae DQ318866 AB039428 FN554759 AB039516 P. tolaasii AF255336 AB039423 AJ717467 AB039561 P. trivialis AJ492831 FN554230 FN554762 FN554515 P. veronii AF064460 FN554233 AJ717445 FN554518 P. vranovensis AY970951 HE577791 HE577793 CP000934 Acinetobacter johnsonii APON00000000 Aschindleri APPQ00000000 ApPPQ00000000 A. schindleri AD APPT00000000 ApPP00000000 ApPP00000000 A. towneri AD APP200000000 ApPQ00000000 Aperg00000000 ApPQ00000000 ApPQ00000000 ApPG0000000 ApPG0000000 ApPG00000000 ApPG000000000 ApPG000000000 <t< td=""><td>P. modeside</td><td>AF064459</td><td>FIN554225</td><td>AJ717431</td><td>FIN554511</td><td></td></t<> | P. modeside | AF064459 | FIN554225 | AJ717431 | FIN554511 | |
| P. synnigue DQ318866 AB039428 FNS54759 AB039516 P. tolaasii AF255336 AB039423 AJ717467 AB039561 P. trivialis AJ492831 FN554230 FN554762 FN554515 P. veronii AF064460 FN554233 AJ717445 FN554518 P. vranovensis AY970951 HE577791 HE577799 HE577793 Cellvibrio japonicus Ueda107 AP0N00000000 A. schindleri APPQ000000000 A. schindleri A. towneri APP200000000 A. johnsonii ANC 3681 APP200000000 A. pP200000000 A. baumannii APRG0000000 A. johnsonii A. indicus APE100000000 A. johnsonii A. indicus APE00000000 A. johnsonii A. indicus APE00000000 A. johnsonii A. indicus APE00000000 A. johnsonii A. indicus | | D84025 | AB039415 | AJ717420 | AB039550 | |
| P. trivialis AF23530 Ab039423 AJ17407 Ab039301 P. trivialis AJ492831 FN554230 FN554762 FN554515 P. veronii AF064460 FN554233 AJ717445 FN554518 P. vranovensis AY970951 HE577791 HE577793 CP000934 Cellvibrio japonicus Ueda107 AP0N00000000 A. schindleri APPQ00000000 AppPQ00000000 A. schindleri APPT00000000 A. towneri APP200000000 A. johnsonii ANC 3681 APP200000000 A. baumannii APRG0000000 A. indicus APRG0000000 APT00000000 A. indicus APT00000000 A. | P. tolaasii | VC210000 | ADU39428 | A1717467 | VB030261 | |
| P. eronii A492231 TN334230 TN334702 TN334313 P. veronii AF064460 FN554233 AJ717445 FN554518 P. vranovensis AY970951 HE577791 HE577799 HE577793 Cellvibrio japonicus Ueda107 C CP000934 Acinetobacter johnsonii APPQ00000000 A. schindleri APPT00000000 A. baylyi APPT00000000 A. towneri APP200000000 A. johnsonii ANC 3681 APP200000000 A. baumannii APRG0000000 A. indicus APRG0000000 A. indicus AYET00000000 A. lwoffii AYET00000000 Psychrobacter sp. PRwf-1 CP000713 | P. toldusii | AF255550 | AD059425 | AJ717407 | AB059501 | |
| P. veronii A1004400 TN334233 R717443 TN334318 P. vranovensis AY970951 HE577791 HE577799 HE577793 Cellvibrio japonicus Ueda107 APON00000000 A. schindleri APPQ00000000 A. schindleri APPT00000000 A. baylyi APPT00000000 A. towneri APP200000000 A. johnsonii ANC 3681 APP200000000 A. baumannii APRG0000000 A. indicus APE00000000 A. indicus APE00000000 A. lwoffii APE00000000 P. workina APE00000000 | P. veronii | AJ492831 | EN554230 | A 1717445 | ENIS54519 | |
| Acinetobacter johnsonii Acinetobacter johnsonii Acinetobacter johnsonii Acinetobacter johnsonii APP00000000 A. schindleri APP00000000 ApP00000000 ApP00000000 ApP00000000 ApP00000000 ApP00000000 ApP00000000 ApP00000000 ApP000000000 App00000000 App00000000 App00000000 App00000000 App200000000 App2000000000 | P. vranovensis | AV070051 | HE577701 | HE577700 | HE577793 | |
| Acinetobacter johnsonii APON0000000 A. schindleri APPQ00000000 A. schindleri APPQ00000000 A. baylyi APPT00000000 A. towneri APP700000000 A. johnsonii ANC 3681 APP200000000 A. bouvetii APP200000000 A. bouvetii APP200000000 A. bouvetii APPG00000000 A. bouvetii APPG00000000 A. indicus AYET00000000 A. lwoffii AYH00000000 Psychrobacter sp. PRwf-1 CP000713 | Celluibrio ignonicus Lleda107 | ATS70551 | 112377731 | TILSTITISS | 112377733 | CP000934 |
| A. schindleri A. PPQ0000000 A. schindleri APPQ00000000 A. baylyi APPT00000000 A. towneri APPT00000000 A. johnsonii ANC 3681 APPZ00000000 A. bouvetii APPZ00000000 A. bouvetii APPZ00000000 A. bouvetii APPG00000000 A. bouvetii APPG00000000 A. indicus AYET00000000 A. lwoffii AYH00000000 Psychrobacter sp. PRwf-1 CP000713 | Acinetobacter johnsonii | | | | | APON0000000 |
| A. baylyi A. haylyi A. baylyi APPT0000000 A. towneri APPT0000000 A. johnsonii ANC 3681 APPZ0000000 A. bouvetii APQD0000000 A. bouvetii APQD0000000 A. bouvetii APQD0000000 A. bouvetii APRG00000000 A. indicus AYET00000000 A. lwoffii AYH00000000 Psychrobacter sp. PRwf-1 CP000713 | A. schindleri | | | | | APP00000000 |
| A. towneri A. PPY0000000 A. johnsonii ANC 3681 APPZ00000000 A. bouvetii APQD0000000 A. bouvetii APQD0000000 A. baumannii APRG00000000 A. indicus AYET00000000 A. lwoffii AYH00000000 Psychrobacter sp. PRwf-1 CP000713 | A. baylyi | | | | | APPT00000000 |
| A. johnsonii ANC 3681 A. PPZ0000000 A. bouvetii APQD0000000 A. baumannii APRG0000000 A. indicus AYET00000000 A. indicus AYET00000000 A. indicus AYET00000000 Psychrobacter sp. PRwf-1 CP000713 | A. towneri | | 1 | | | APPY0000000 |
| A. bouvetii APQD0000000 A. bouvetii APQD00000000 A. baumannii APRG00000000 A. indicus AYET00000000 A. lwoffii AYH00000000 Psychrobacter sp. PRwf-1 CP000713 | A. johnsonii ANC 3681 | | | | | APP700000000 |
| A. baumannii A. PRG0000000 A. indicus APRG0000000 A. indicus AYET0000000 A. lwoffii AYH00000000 Psychrobacter sp. PRwf-1 CP000713 | A. bouvetii | | | | | APOD0000000 |
| A. indicus AYET0000000 A. lwoffii AYH00000000 Psychrobacter sp. PRwf-1 CP000713 | A. baumannii | | | | | APRG00000000 |
| A. Iwoffii AYH0000000 Psychrobacter sp. PRwf-1 CP000713 | A. indicus | | | | | AYET00000000 |
| Psychrobacter sp. PRwf-1 CP000713 | A. Iwoffii | | | | | AYHO00000000 |
| | Psychrobacter sp. PRwf-1 | | | | | CP000713 |

Table S6 References used for 16S rRNA amplicon analysis in Qiime

The 17 partial 16S rRNA (V3-V4) gene sequences of the 16 background flora strains plus L. monocytogenes used in experiments in the current study. This sequence file was used as the reference database to identify the different taxa in the Qiime analysis.

>P-putida-MF6396

TGGGGAATATTGGACAATGGGCGAAAGCCTGATCCAGCCATGCCGCGTGTGTGAAGAAGGTCTTCGGATGTAAAGCACTTTAAGTTGGGAAGGACGAAGGCCAGTAAGCCGAATACCTTGCTGTTTTGACGTTACCG CTGAGGTGCGAAAGCGTGGGGAGCAAACA

>P-fluorescens-MF6394

CAGAATAAGCACCGGCTAACTCTGTGCCAGCAGCGGCGGTAATACAGAGGGTGCAAGCGTTAATCGGAATTACTGGGCGTAAAGCGCGCGTAGGTGGTTGTTAAGTTGGATGTGAAATCCCCGGGCTCAACC GAGGTGCGAAAGCGTGGGGGGGGCAAACA

>L-monocytogenes

GGGGAGGGTCATTGGAAACTGGAAGACTGGAGGGGGAGAGGAGAGGGGAGAGTGGAAATCCCACGTGTAGCGGTGAAATGCGTAGGAGGAACCACCAGTGGCGAAGGCGACTCTCTGGTCTGTAACTGACG CTGAGGCGCGAAAGCGTGGGGAGCAAACA

>Acinetobacter-MF4640

CGCAGAATAAGCACCGGCTAACTCTGTGCCAGCAGCGGGTAATACAGAGGGTGCGAGCGTTAATCGGATTTACTGGGCGTAAAGCGTGCGGAGCGGCTTTTAAGTCGGATGGAAATCCCTGAGCTTAAC TTAGGAATTGCATTCGATACTGGGAAGCTAGAGTATGGGAGAGGATGGTAGAATTCCAGGTGTAGCGGTGAAATGCGTAGAGATCTGGAGGAATACCGATGGCGAAGGCAGCCATCTGGCCTAATACTGACG CTGAGGTACGAAAGCATGGGGAGCAAACA

>Acinetobacter-MF4642

TAGGAATTGCATTCGATACTGGGAAGCTAGAGTATGGGAGAGAGGATGGTAGAATTCCAGGTGTAGCGTGAAATGCGTAGAGATCTGGAGGAATACCGATGGCGAAGGCAGCCATCTGGCCTAATACTGACGC TGAGGTACGAAAGCATGGGGGAGCAAACA

>P-mandelii-MF4836

TGGGGAATATTGGACAATGGGCGAAAGCCTGATCCAGCCATGCCGCGTGTGTGAAGAAGGACTTTCGGATGTAAAGCACTTTAAGTTGGGAAGGACAGTTACCTAATACGTGATTGTTTGACGTGATACCGA CAGAATAAGCACCGGCTAACTCTGTGCCAGCAGCCGCGGTAATACAGAGGGTGCAAGCGTTAATCGGAATTACTGGGCGTAAAGCGCGCGTAGGTGGTTTGTTAAGTTGAAATCCCCCGGGCTCAACC TGAGGTGCGAAAGCGTGGGGAGCAAACA

>Psychrobacter-MF4641

TGCCGCGTGTGTGAAGAAGGCCTTTTGGTTGTAAAGCACTTTAAGCAGTGAAGAAGACTCCATGGTTAATACCCATGGACGATGACATTAGCTGCAGAATAAGCACCCGGGCTAACTCTGTGCCAGCAGCAGCCGCGGT GAGGAAGGTAGAATTCCAGGTGTAGCGGTGAAATGCGTAGAGATCTGGAGGAATACCGATGGCGAAGGCAGCCTTCTGGCATCATACTGACACTGAGGTTCGAAAGCGTGGGTAGCAAACA >R-ervthropolis-MF4633

CGCGTGAGGGATGACGGCTTCGGGTTGTAAACCTCTTTCAGCAGGGACGAAGCGCAAGTGACGGTACCTGCAGAAGAAGCACCGGCTAACTACGTGCCAGCAGCGGGTAATACGTAGGGTGCAAGCGCT GTCCGGAATTACTGGGCGTAAAGAGTTCGTAGGCGGTTTGTCGCGTCGTTTGTGGAAAACCAGCAGCTCAACTGCTGGCTTGCAGGCGATACGGGCAGACTTGAGTACTGCAGGGGAGACTGGAATTCCTGGTG TAGCGGTGAAATGCGCAGATATCAGGAGGAACACCGGTGGCGAAGGCGGGTCTCTGGGCAGTAACTGACGCTGAGGAACGAAAGCGTGGGTAGCGAACA >R-fascians-MF4637

CCTGGTGTAGCGGTGAAATGCGCAGATATCAGGAGGAACACCGGTGGCGAAGGCGGGGTCTCTGGGAAACAACTGACGCTGAGGAACGAAAGCGTGGGTAGCAAACA

>Sphingomonas-MF4632

AGGTGAAATTCGTAGATATTCGGAAGAACACCAGTGGCGAAGGCGGCTGACTGGACATGTATTGACGCTGAGGTGCGAAAGCGTGGGGAGCAAACA >C-sputi-MF4643

TAATACGTAGGGTGCGAGCGTTGTCCGGAATTACTGGGCGTAAAGAGCTCGTAGGTGGTTTGTCGCGTCGTCGTGAAATTCCGGGGCCTTAACTCCGGGCGGCAGACGGCGATAACGTGGGCATAACTTGAGTGCTGT AGGGGAGACTGGAATTCCTGGTGTAGCGGTGAAATGCGCAGATATCAGGAGGAACACCGATGGCGAAGGCAGGTCTCTGGGCAGTAACTGACGCTGAGGAGCAAAGCATGGGGAGCAAACA >C-variabile-MF4645

ΑΘΤΊΑ ΘΑ ΘΑ ΠΑΤΤΆΑΤΑ ΑΛΑΘΑΘΑΤΑΤΑΘΊΑΘΑ ΤΑ ΤΑΘΑΘΊΤΤΑ ΤΑ ΑΤΤΊΘΑΘΑ ΘΙ ΤΤΑ ΤΑ ΑΛΑΘΤΑΤΙΤΑ ΤΑ ΑΛΑΘΙΑ ΤΑ ΤΑ ΑΛΑΘΙΑ ΑΛΑ ΤΟ ΤΑ ΑΛΑΘΑΘΑ ΑΛΑΤΑΛΑΘΑΘΑΤΑ ΤΑ ΑΛΑΘΑΘΑΊΑΤΑ ΑΛΑΘΙΑ ΤΑ ΑΤΤΊΘΑΘΑ ΑΛΑΤΑΤΙΤΑ ΑΛΑΘΙΑ ΤΑ ΤΑ ΑΛΑΓΙΑ ΑΛΑΤΑΊΘΑ ΑΛΑΤΑΊΘΑ Α AATTCCTGGTGTAGCGGTGAAATGCGCAGATATCAGGAGGAACACCGATGGCGAAGGCAGGTCTCTGGGCAGTTACTGACGCTGAGGAGCGAAAGCATGGGTAGCGAACA

>Microbacterium-MF4634

CGCAAGCGTTATCCGGAATTATTGGGCGTAAAGAGCTCGTAGGCGGTTTGTCGCGTCTGCTGTGAAATCCGGAGGCTCAACCTCCGGCCTGCAGTGGGTACGGGCAGACTAGAGTGCGGTAGGGGGAGATTGGA ATTCCTGGTGTAGCGGTGGAATGCGCAGATATCAGGAGGAAGACACCCGATGGCGAAGGCAGATCTCTGGGCCGTAACTGACGCTGAGGAGCGAAAGGGTGGGGAGCAAACA >Kocuria-MF6395

GCAGCGACGCCGCGTGAGGGATGACGGCCTTCGGGTTGTAAACCTCTTTCAGCACGGAAGAAGCGAGGGTGACGGTCGGCAGAAGAAGCGCCGGCTAACTACGTGCCAGCAGCGGCGGTAATACGTAGCG AATTCCTGGTGTAGCGGTGAAATGCGCAGATATCAGGAGGAGGAACACCGATGGCGAAGGCAGGTCTCTGGGCTGTTACTGACGCTGAGGAGCGAAAGCATGGGGAGCGAACA

>Kocuria-MF4644

CGCAAGCGTTGTCCGGAATTATTGGGCGTAAAGAGCTCGTAGGCGGTTTGTCGCGTCTGCGTGTGAAAGCCCGGGGCTTAACTCCGGGTCTGCAGTGGGTACGGGCAGACTAGAGTGCAGTAGGGGAGACTGG AATTCCTGGTGTAGCGGTGAAATGCGCAGATATCAGGAGGAACACCGATGGCGAAGGCAGGTCTCTGGGCTGTACTGACGCTGAGGAGCGAAAGCATGGGGAGCGAACA

>Micrococcus-MF6369

GTGAGGGATGACGGCCTTCGGGTTGTAAACCTCTTTCAGTAGGGAAGAAGCGAAAGTGACGGTACCTGCAGAAGAAGCACCGGCTAACTACGTGCCAGCAGCGGCGAATACGTAGGGTGCGAGCGTTATC CGGAATTATTGGGCGTAAAGAGCTCGTAGGCGGTTTGTCGCGTCTGTCGTGAAAGTCCGGGGGCTTAACCCCCGGATCTGCGGTAGGGCAGACTAGAGTGCAGTAGGGGAGACTGGAATTCCTGGTGTA >Enilithonimonas-ME6392

TGGAATAAGTAGTGTAGCGGTGAAATGCATAGATATTACTTAGAACACCAATTGCGAAGGCAGGTTACCAAGTCTTAACTGACGCTGAGGGACGAAAGCGTGGGGGAGCGAACA



Neighbor-joining phylogeny of strains belonging to the genus *Pseudomonas.* The tree is based on concatenated partial 16S rRNA, *gyrB*, *rpoB*, and *rpoD* gene sequences, and *Cellvirio japonicus* Ueda107 was used as an outgroup. The strains sequenced in the current study are in red bold. Type strains are indicated by superscript T. Evolutionary distances were computed with MEGA (version 7) using the Jukes-Cantor method. The bar indicates the number of base substitutions per site. Percentage bootstrap values above 50% (from 1000 replicates) are shown next to the nodes.



Neighbor-joining phylogeny of strains belonging to the genus *Acinetobacter*. The tree is based on concatenated partial *cpn60*, *fusA*, *gltA*, *pyrG*, *recA*, *rplB* and *rpoB* gene sequences according to the MLST scheme described by Diancourt *et al*. (1). *Psychrobacter* sp. PRwf-1 was used as an outgroup. The strains sequenced in the current study are in red bold. Type strains are indicated by superscript T. Evolutionary distances were computed with MEGA (version 7) using the Jukes-Cantor method. The bar indicates the number of base substitutions per site. Percentage bootstrap values above 50% (from 1000 replicates) are shown next to the nodes.

1. **Diancourt L, Passet V, Nemec A, Dijkshoorn L, Brisse S.** 2010. The population structure of *Acinetobacter baumannii*: expanding multiresistant clones from an ancestral susceptible genetic pool. PLoS One **5:**e10034.



Development of the microbiota in multigenera biofilms and planktonic cultures, showing results from individual experiments. Numbers 1 to 5 below each column refer to experiment number. The frequencies of different bacterial strains was determined by 16S rRNA amplicon sequencing. Multigenera biofilms were grown on conveyor belt coupons, and inoculated with *L. monocytogenes* plus either 16 (experiments 1 to 3) or four (experiments 4 and 5) background microbiota strains. The biofilms were allowed to develop for four days before being subjected to daily cleaning with Alkalifoam and disinfection with either a QAC-based or a PAA-based disinfection agent. Coupons were harvested either before or after C&D on the day of harvest, as indicated. Planktonic competition cultures were inoculated with *L. monocytogenes* plus 16 background microbiota strains and grown with shaking in Erlenmeyer flasks for a total of 72 h. All samples were grown in BHI broth at 12°C.



Competition between *L. monocytogenes* strains during biofilm and planktonic growth, showing results from individual experiments. Numbers 1 to 3 below each column refer to experiment number. Inoculated suspensions were composed of equal amounts of seven different *L. monocytogenes* strains, grown either together with 16 background microbiota strains (multigenera biofilm/culture) or alone (*L. monocytogenes* biofilm/culture). Results for biofilm growth shows frequencies of *L. monocytogenes* strains surviving in biofilms on conveyor belt coupons. Biofilms were allowed to develop for four days and then subjected to daily cleaning with Alkalifoam and disinfection with either a QAC-based or a PAA-based disinfection agent on four consecutive days before harvest. The identity of single colonies of *L. monocytogenes* was determined by Sanger sequencing of the *dapE* allele. Results in each column correspond to results for ten single *L. monocytogenes* colonies identified in one experiment. Planktonic competition cultures show the relative abundance of *L. monocytogenes* strains in time-course experiments, where cultures were grown with shaking in Erlenmeyer flasks for a total of 72 h. The frequencies of different *L. monocytogenes* strains was determined by *dapE* amplicon sequencing.



measurement of biomass obtained from CLSM Z-scans. A) and B) shows the data grouped by samples collected before and after C&D; collected after 4 and 7 days of biofilm growth. The same data is shown in A) and B), in C) and D), and in E) and F), respectively, except C) and D) compares the biomass measurements obtained on the front versus the back of coupons, while E) and F) compares samples that the y-axis scale is different and only measurements of total volume of biomass \leq 1000 μ m³ per scan are presented in B), D), and The biovolume of L. monocytogenes on conveyor belt coupons. The data is presented as beeswarm plots showing each individual F). Different colored points represent different samples as listed in the legends to the right of each pair of graphs.