**Supplementary table 1** The cases detected drug resistance genes by Nanopore sequencing

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Case | Pathogen by culture | Pathogen by Nanopore (No. of reads) | Resistance genes (No. of alignments) | Antimicrobial susceptibility test |
| 22T0017531 | *Klebsiella pneumoniae* | *Mycobacterium intracellulare* (117)*Klebsiella pneumoniae* (151)*Haemophilus haemolyticus* (45)*Serratia marcescens* (9)*Treponema denticola* (9) | blaTEM (28) | S: all tested agents |
| 22T005882 | *Pseudomonas aeruginosa* | *Pseudomonas aeruginosa* (633) | blaTEM (1) | S: all tested agents |
| 22T0007742 | *Candida albicans, Aspergillus fumigatus* | *Mycobacterium tuberculosis* (2)*Haemophilus influenzae* (246)*Candida albicans* (7759)*Aspergillus fumigatus* (2) | blaTEM (1) | S: Flucytosine, Fluconazole, Voriconazole, Amphotericin B, Itraconazole |
| 22T007358 | *Klebsiella pneumoniae* | *Mycobacterium tuberculosis* (130)*Klebsiella pneumoniae* (20)*Mycobacterium intracellulare* (20) | blaTEM (14) | Not tested  |
| 22T0009278 | *Enterococcus faecalis* | *Porphyromonas endodontalis* (3086)*Enterococcus faecalis* (31)*Human betaherpesvirus 5* (16)*Human gammaherpesvirus 4* (6) | Negative | R: PenicillinS: Gentamicin, Ampicillin, VancomycinI: Linezolid |
| 22T0007741 | *Acinetobacter calcoaceticus-Acinetobacter baumannii complex* | *Haemophilus influenzae* (2) | Negative | S:Ceftazidime, Piperacillin-tazobactam, Meropenem, Amikacin, Gentamicin, Polymyxin, CiprofloxacinI: Cefotaxime |
| 22T005306 | *Pseudomonas aeruginosa* | *Pseudomonas aeruginosa* (9364) | Negative | I: Polymyxin, CiprofloxacinS: Gentamicin, Amikacin, Imipenem, Meropenem |
| 22T005752 | *Klebsiella pneumoniae**Mycobacterium tuberculosis* | *Mycobacterium tuberculosis* (12)*Klebsiella pneumoniae* (30) | Negative | S: all tested agents |
| 21T010888 | *Pseudomonas aeruginosa* | *Pseudomonas aeruginosa* (960)*Candida albicans* (5) | Negative | I: Cefepime |
| 21T005578 | *Candida albicans* | *Nocardia transvalensis* (31)*Candida albicans* (10190) | Negative | S: Flucytosine, Fluconazole, Voriconazole, Amphotericin B Itraconazole |
| 22T002594 | *Pseudomonas aeruginosa* | *Pseudomonas aeruginosa* (60) | Negative | R: Imipenem, MeropenemI: Polymyxin |
| 22T000494 | *Candida* *glabrata* | *Corynebacterium argentoratense* (5924) | Negative | S: Flucytosine, Fluconazole, Voriconazole, Amphotericin B Itraconazole |
| 21T007405 | *Serratia marcescens* | *Serratia marcescens* (8)*Raoultella ornithinolytica* (2) | Negative | R: Tetracycline |
| 22T0016637 | *Streptococcus pneumoniae, Mycobacterium intracellulare* | *Streptococcus pneumoniae* (14)*Haemophilus influenzae* (209)*Human alphaherpesvirus* 1 (30)*Human alphaherpesvirus* 2 (3) | blaTEM (202) | Not tested  |
| 22T004595 | *Streptococcus pneumoniae* | *Streptococcus pneumoniae* (940)*Aggregatibacter segnis* (174)*Dolosigranulum pigrum* (2)*Human gammaherpesvirus* 4 (33) | blaTEM (841) | Not tested  |
| 22T005899 | *Streptococcus pneumoniae* | *Mycobacterium intracellulare* (15)*Streptococcus pneumoniae* (34)*Aspergillus penicillioides* (7)*Klebsiella pneumoniae* | blaTEM (2) | Not tested  |
| 22T005401 | *Cryptococcus neoformans* | *Cryptococcus neoformans* (14)*Klebsiella pneumoniae**Human alphaherpesvirus* 1 | blaSHV (1) | Not tested  |
| 22T007041 | *Staphylococcus aureus* | *Mycobacterium tuberculosis* (3)*Haemophilus haemolyticus* (487)*Staphylococcus aureus* (12)*Candida albicans* (6)*Human gammaherpesvirus* 4 (10) | mecA (8) | Not tested  |
| 22T006951 | *Candida albicans* | *Pseudomonas aeruginosa* (3)*Candida albicans* (5) | blaCTX-M (2） | Not tested  |
| 21T003423 | *Klebsiella pneumoniae, Candida albicans* | *Klebsiella pneumoniae* (11722), *Candida albicans* (2782) | blaSHV | Not tested  |
| 21T003545 | *Klebsiella pneumoniae, Candida albicans* | *Klebsiella pneumoniae* (16752), *Candida albicans* (3) | blaSHV | Not tested  |
| 22T003064 | *Hemophilus influenzae* | *Acinetobacter baumannii* (83)*Hemophilus influenzae* (10)*Pseudomonas aeruginosa* (6) | blaTEM | Not tested  |
| 22T003646 | *Pseudomonas aeruginosa, Stenotrophomonas maltophilia* | *Corynebacterium striatum* (3249)*Pseudomonas aeruginosa* (3081)*Stenotrophomonas maltophilia* (648)*Achromobacter xylosoxidans* (395)*Proteus mirabilis* (71)*Enterococcus faecium* (25) | blaTEM (1) | Not tested  |
| 22T003122 | *Streptococcus pneumoniae* | *Streptococcus pneumoniae* (3769) | blaTEM (10) | Not tested  |
| 22T0007653 | *Candida glabrata* | *Haemophilus haemolyticus* (9)*Treponema denticola* (556) | blaTEM(8) | Not tested  |
| 22T0010476 | Negative | *Staphylococcus aureus* (355)*Enterococcus faecium* (4)*Acinetobacter baumannii* (4)*Candida albicans* (446)*Human alphaherpesvirus* 1 (1239)*Human gammaherpesvirus* 4 (4) | mecA(5) | Not tested  |
| 22T0016098 | Negative | *Streptococcus pneumoniae* (122) | blaTEM (19) | Not tested  |
| 22T0007747 | Negative | *Mycobacterium tuberculosis* (2)*Klebsiella pneumoniae* (10) | blaTEM (1) | Not tested  |
| 21T008153 | Negative | *Mycobacterium tuberculosis* (5) | blaTEM (1) | Not tested  |
| 22T0012664 *#* | Negative | *Solobacterium moorei* (14)*Fusobacterium nucleatum* (6)*Cutibacterium acnes* (3)*Acinetobacter guillouiae* (1) | blaTEM (1) | Not tested  |
| 22T004805 | Negative | *Haemophilus haemolyticus* (237)*Moraxella catarrhalis* (33) | blaTEM (140) | Not tested  |
| 22T0009080 | Negative | *Mycobacterium intracellulare* (10)*Haemophilus influenzae* (365)*Tropheryma whipplei* (2) | blaTEM (218) | Not tested  |
| 22T0007717 | Negative | *Haemophilus haemolyticus* (129)*Aspergillus fumigatus* (2) | blaTEM (3) | Not tested  |
| 22T000619 | Negative | *Klebsiella pneumoniae* (8)*Staphylococcus aureus* (5) | blaTEM (8) | Not tested  |
| 22T0016634 | Negative | *Proteus mirabilis* (35)*Streptococcus pneumoniae* (14) | sul2 (14)blaTEM (14)sul1 (13)tet(B) (4)aac(3)-IId (11) | Not tested  |
| 22T0016636 | Negative | *Proteus mirabilis* (14) | sul2 (5)blaTEM (4)sul1 (11)tet(B) (14)aac(3)-IId (8) | Not tested  |
| 22T0016444 | Negative | *Mycoplasma pneumoniae* (1030) | 98.67% similarity with 23S rRNA | Not tested  |
| 22T006314 | Negative | *Pseudomonas aeruginosa* (4726)*Aspergillus quadrilineatus* (1485) | aph(3')-VI (1)aac(6')-Ib-G (27)aac(6')-IId (2)aac(6')-Ib' (3)aac(6')-Ib11 (1)ant(3'')-Ij (2)aac(6')-30 (2)aac(6')-Ib-AGKT (1)aac(6')-Ib-AKT (1)aac(3)-IIe (1)blaTEM (2) | Not tested  |
| 22T0016115 | Negative | *Haemophilus influenzae* (1245)*Proteus mirabilis* (55) | aph(3')-VI(3)sul1(1)sul2(19)aac(6')-Ib-G(32)blaTEM(560)aac(6')-Ib-AKT(6)aac(6')-30(3)aac(6')-IId(5)blaKPC(1)aac(6')-Ib-generic(1)aac(6')-Ib11(1)aac(6')-Ib'(4)ant(3'')-Ij(1) | Not tested  |
| 21T009464 | Negative | *Mycobacterium tuberculosis* (2) *Klebsiella pneumoniae* (6) | blaSHV(5)blaCTX-M(2)blaTEM(4)blaKPC(3) | Not tested  |
| 22T007385 | Negative | *Haemophilus haemolyticus* (24)*Human gammaherpesvirus 4* (59) | blaTEM | Not tested  |
| 22T001700 | Negative | *Campylobacter concisus* (77)*Streptococcus pneumoniae* (9) | blaTEM (1) | Not tested  |
| 22T0009087 | Negative | *Haemophilus haemolyticus* (2343)*Aggregatibacter segnis* (684)*Staphylococcus aureus* (25)*Tropheryma whipplei* (9) | blaTEM(2084) | Not tested  |
| 22T001699 | Negative | *Staphylococcus aureus* (342)*Haemophilus haemolyticus* (27)*Mycoplasma pneumoniae* (22421) | blaTEM(3) | Not tested  |
| 22T0010470 | Negative | *Mycobacterium tuberculosis* (138)*Stenotrophomonas maltophilia* (6500) | blaTEM(7) | Not tested  |

Abbreviations: R Resistant, I Intermediate, S Susceptible

No potential pathogens were detected by Nanopore, but commensals were identified by Nanopore in case noted #.



**Supplementary figure 1** Targeted nanopore sequencing workflow.