Supporting Information

Rapid Detection of Mobilized Colistin Resistance using a Nucleic Acid Based Lab-on-a-Chip Diagnostic System

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Supporting information includes:

- sequences of the \textit{mcr}-9 LAMP primers (Table S1)
- results and information of the carbapenem-resistant clinical isolates used in this study (Table S2 and S3),
- summary of results obtained from samples analysed on-chip (Table S4).
- nucleotide sequences for synthetic double-stranded DNA (Table S5),
- accession number list for alignments (Table S6),
- raw and processed on-chip data (Figures S1, S2, S3 and S4)
- annotated photograph of the LoC platform without the case (Figure S5)

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Table S1. Sequences of LAMP primers for specific detection of the mcr-9 gene.

| Primer ID | Sequence (5’-3’)                                                                 |
|-----------|----------------------------------------------------------------------------------|
| F3_mcr9   | AAAAATTACAGCGATCAGTACA                                                           |
| B3_mcr9   | CGCATTATTGGCAAGGCAAG                                                            |
| FIP_mcr9  | GGCGTGCCGCTGAGATAG-CGTGCTGCTTTATGTGTC                                             |
| BIP_mcr9  | CGGATCAGCAGCCTATTC-CATGTTGATGTGTTTCCCCG                                             |
| LF_mcr9   | CGCCCAATGATTCACCATGTC                                                            |
| LB_mcr9   | AGGTCTGGATGTCAAGG                                                                |

**F3**, forward outer primer; **B3**, backward outer primer; **FIP**, forward inner primer; **BIP**, backward inner primer; **LF**, loop forward primer; **LB**, loop backward primer.
Table S2. Carbapenem-resistant isolates analyzed by whole genome sequencing.

| Isolate ID | Bacterial strains (MALDI-TOF) | Collected    | Specimen Type | Source | Carbapenemase | mcr9 gene | qLAMP (TTP) | WGS |
|------------|-------------------------------|--------------|---------------|--------|---------------|-----------|-------------|-----|
| #1    | Acinetobacter baumannii       | 16/05/2019   | S             | RS     | IMP1, NDM & OXA-51 like | NEG | NEG |             |
| #2    | Acinetobacter baumannii       | 27/05/2019   | S             | RS     | IMP1, NDM & OXA-51 like | NEG | NEG |             |
| #3    | Citrobacter freundii          | 21/02/2016   | S             | RS     | OXA48 | POS (6.62 min) | POS |             |
| #4    | Citrobacter freundii          | 19/08/2017   | S             | RS     | IMP1 | POS (6.47 min) | POS |             |
| #5    | Enterobacter bugandensis      | 12/06/2017   | S             | RS     | IMP1 | NEG | NEG |             |
| #6    | Enterobacter cloacae          | 14/06/2016   | S             | RS     | IMP1 | NEG | NEG |             |
| #7    | Enterobacter cloacae          | 16/06/2016   | S             | RS     | OXA48 and IMP1 | POS (5.35 min) | POS |             |
| #8    | Enterobacter cloacae          | 28/08/2017   | S             | RS     | IMP1 | NEG | NEG |             |
| #9    | Enterobacter cloacae          | 03/10/2017   | S             | RS     | IMP1 | NEG | NEG |             |
| #10   | Enterobacter cloacae          | 11/10/2017   | S             | RS     | IMP1 | POS (6.53 min) | POS |             |
| #11   | Enterobacter cloacae          | 20/11/2017   | S             | TS     | IMP1 | NEG | NEG |             |
| #12   | Enterobacter cloacae          | 28/01/2018   | S             | RS     | IMP1 | POS (7 min) | POS |             |
| #13   | Enterobacter cloacae          | 06/02/2018   | S             | RS     | IMP1 | POS (6.86 min) | POS |             |
| #14   | Enterobacter cloacae          | 06/02/2018   | S             | RS     | IMP1 | POS (6.81 min) | POS |             |
| #15   | Enterobacter cloacae          | 21/02/2018   | S             | RS     | IMP1 | POS (6.63 min) | POS |             |
| #16   | Enterobacter cloacae          | 22/04/2018   | S             | RS     | IMP1 | POS (6.63 min) | POS |             |
| #17   | Enterobacter cloacae          | 26/06/2018   | S             | RS     | IMP1 | POS (6.24 min) | POS |             |
| #18   | Enterobacter cloacae          | 06/08/2018   | S             | RS     | IMP1 | POS (6.41 min) | POS |             |
| #19   | Enterobacter cloacae          | 18/08/2018   | S             | RS     | IMP1 | POS (6.73 min) | POS |             |
| #20   | Enterobacter cloacae          | 06/09/2018   | S             | RS     | IMP1 | POS (6.8 min) | POS |             |
| #21   | Enterobacter cloacae          | 12/01/2019   | S             | RS     | IMP1 | POS (6.55 min) | POS |             |
| #22   | Enterobacter cloacae          | 08/02/2019   | S             | RS     | IMP1 | NEG | NEG |             |
| #23   | Enterobacter cloacae          | 13/03/2019   | S             | RS     | IMP1 | NEG | NEG |             |
| #24   | Enterobacter cloacae          | 25/03/2019   | S             | RS     | IMP1 | POS (6.52 min) | POS |             |
| #25   | Enterobacter cloacae          | 21/02/2018   | S             | RS     | IMP1 | POS (7.03 min) | POS |             |
| #26   | Enterobacter hormaechei       | 15/12/2016   | S             | RS     | IMP1 | POS (7.03 min) | POS |             |
| #27   | Enterobacter hormaechei       | 26/01/2017   | S             | RS     | IMP1 | POS (6.32 min) | POS |             |
| #28   | Enterobacter hormaechei       | 26/07/2017   | S             | RS     | IMP1 | POS (6.67 min) | POS |             |
| #29   | Enterobacter hormaechei       | 22/01/2018   | S             | RS     | IMP1 | POS (6.5 min) | POS |             |
| #30   | Enterobacter sp.              | 09/08/2017   | S             | RS     | IMP1 | POS (6.08 min) | POS |             |
| #31   | Enterobacter sp.              | 03/10/2017   | CL            | U      | IMP1 | POS (6.78 min) | POS |             |
| #32   | Enterobacter sp.              | 05/10/2017   | S             | RS     | IMP1 | POS (6.49 min) | POS |             |
| #33   | Enterobacter sp.              | 08/05/2019   | CL            | NPA    | IMP1 | POS (6.39 min) | POS |             |
| #34   | Enterobacter sp.              | 08/05/2019   | CL            | S      | IMP1 | NEG | NEG |             |
| #35   | Enterobacter xiangfangensis   | 13/03/2019   | S             | RS     | IMP1 | POS (7.88 min) | POS |             |
| #36   | Enterobacter xiangfangensis   | 27/05/2019   | S             | RS     | IMP1 | POS (6.83 min) | POS |             |
| #37   | Escherichia coli              | 08/02/2018   | S             | RS     | IMP1 | POS (6.6 min) | POS |             |
| #38   | Escherichia coli              | 25/04/2019   | S             | RS     | IMP1 | POS (6.21 min) | POS |             |
| #39   | Escherichia coli              | 11/05/2019   | CL            | U      | IMP1 | POS (6.27 min) | POS |             |
| #40   | Klebsiella aerogenes          | 07/01/2019   | S             | RS     | IMP1 | NEG | NEG |             |
| #41   | Klebsiella aerogenes          | 27/02/2019   | S             | RS     | IMP1 | POS (6.34 min) | POS |             |
| #42   | Klebsiella aerogenes          | 08/04/2019   | S             | RS     | IMP1 | POS (6.71 min) | POS |             |
| #43   | Klebsiella oxytoca            | 08/04/2019   | S             | RS     | IMP1 | NEG | NEG |             |
| #44   | Klebsiella pneumoniae         | 17/07/2017   | S             | RS     | IMP1 | NEG | NEG |             |
| #45   | Klebsiella pneumoniae         | 23/07/2017   | S             | RS     | IMP1 | POS (5.53 min) | POS |             |
| #46   | Klebsiella pneumoniae         | 09/09/2017   | S             | RS     | IMP1 | POS (6.02 min) | POS |             |
| #47   | Klebsiella pneumoniae         | 19/09/2017   | S             | RS     | IMP1 | NEG | NEG |             |
| #48   | Klebsiella pneumoniae         | 28/10/2017   | S             | RS     | IMP1 | POS (6.63 min) | POS |             |
| #49   | Klebsiella pneumoniae         | 28/11/2017   | S             | RS     | IMP1 | POS (6.91 min) | POS |             |
| #50   | Klebsiella pneumoniae         | 02/04/2018   | S             | RS     | IMP1 | POS (6.93 min) | POS |             |
| #51   | Klebsiella pneumoniae         | 09/04/2018   | S             | RS     | IMP1 | POS (6.59 min) | POS |             |
| #52   | Klebsiella pneumoniae         | 07/09/2018   | S             | RS     | IMP1 | POS (6.52 min) | POS |             |
| #53   | Klebsiella pneumoniae         | 10/09/2018   | S             | RS     | IMP1 | POS (6.79 min) | POS |             |
| #54   | Klebsiella quasipneumoniae    | 11/02/2019   | S             | RS     | IMP1 | POS (6.63 min) | POS |             |
| #55   | Pseudomonas aeruginosa        | 20/11/2018   | S             | U      | IMP1 | POS (7.13 min) | POS |             |
| #56   | Raoultella planticola         | 02/10/2017   | CL            | FB     | IMP1 | POS (6.53 min) | POS |             |

MALDI-TOF MS, matrix-assisted laser desorption/ionization time-of-flight mass spectrometry; qLAMP, quantitative loop-mediated isothermal amplification; TTP, time-to-positive; WGS, whole genome sequencing; S, screen; CL, clinical; RS, rectal swab; FB, foot biopsy; U, urine; TS, throat swab; NPA, nasopharyngeal aspirate; S, sputum; ES, eye swab. All samples were negative for mcr-1 to mcr-8 by PCR.
| Isolate ID | Bacterial strains (MALDI-TOF) | Collected | Source | Carbapenemase | mcr-9 qLAMP |
|------------|-------------------------------|-----------|--------|---------------|-------------|
| #57        | Acinetobacter baumannii       | 05/01/2016 | Rectal Swab | OXA5 and NDM | NEG         |
| #58        | Acinetobacter baumannii       | 26/02/2015 | BAL    | OXA23         | NEG         |
| #59        | Acinetobacter sp.             | 08/09/2015 | Perineum swab | OXA58        | NEG         |
| #60        | Citrobacter freundii          | 06/01/2016 | Rectal Swab | OXA48        | NEG         |
| #61        | Citrobacter freundii          | 13/12/2015 | Rectal Swab | OXA48        | NEG         |
| #62        | Citrobacter freundii          | 02/04/2016 | Rectal Swab | VIM          | NEG         |
| #63        | Citrobacter freundii          | 01/10/2017 | Rectal Swab | KPC          | NEG         |
| #64        | Citrobacter freundii          | 15/10/2017 | Rectal Swab | KPC          | NEG         |
| #65        | Enterobacter cloacae          | 14/01/2015 | Bone (Tibia R) | VIM          | NEG         |
| #66        | Escherichia coli              | 01/08/2016 | Rectum | NDM           | NEG         |
| #67        | Escherichia coli              | 05/03/2015 | High vaginal swab | NDM        | NEG         |
| #68        | Escherichia coli              | 14/03/2014 | Wound Swab (Penis Prenucose) | OXA48 | NEG         |
| #69        | Escherichia coli              | 20/10/2015 | Rectal Swab | OXA48        | NEG         |
| #70        | Escherichia coli              | 04/04/2015 | MSU    | OXA48        | NEG         |
| #71        | Escherichia coli              | 25/11/2012 | Wound Swab (Foot R) | OXA48 | NEG         |
| #72        | Escherichia coli              | 21/07/2013 | Blood | OXA48        | NEG         |
| #73        | Escherichia coli              | 09/04/2015 | Perineum swab | NDM        | NEG         |
| #74        | Escherichia coli              | 01/12/2014 | Rectal Swab | NDM and OXA48 | NEG         |
| #75        | Escherichia coli              | 23/11/2015 | Faeces | NDM           | NEG         |
| #76        | Escherichia coli              | 26/12/2015 | Rectal Swab | NDM        | NEG         |
| #77        | Klebsiella oxytoca            | 13/08/2015 | Urine | GES5         | NEG         |
| #78        | Klebsiella oxytoca            | 26/09/2015 | Rectal Swab | GES5       | NEG         |
| #79        | Klebsiella pneumoniae         | 08/10/2012 | Wound Swab | KPC        | NEG         |
| #80        | Klebsiella pneumoniae         | 22/03/2014 | MSU    | KPC          | NEG         |
| #81        | Klebsiella pneumoniae         | 10/09/2017 | Rectal Swab | KPC        | NEG         |
| #82        | Klebsiella pneumoniae         | 08/04/2015 | MSU    | KPC          | NEG         |
| #83        | Klebsiella pneumoniae         | 11/09/2017 | Rectal Swab | KPC        | NEG         |
| #84        | Klebsiella pneumoniae         | 25/12/2015 | MSU    | NDM          | NEG         |
| #85        | Klebsiella pneumoniae         | 18/12/2015 | Rectal Swab | NDM        | NEG         |
| #86        | Klebsiella pneumoniae         | 02/08/2016 | Throat swab | NDM        | NEG         |
| #87        | Klebsiella pneumoniae         | 18/04/2015 | Rectal Swab | NDM        | NEG         |
| #88        | Klebsiella pneumoniae         | 23/04/2015 | Urine | NDM          | NEG         |
| #89        | Klebsiella pneumoniae         | 25/04/2015 | Rectal Swab | NDM        | NEG         |
| #90        | Klebsiella pneumoniae         | 04/12/2016 | Rectal Swab | NDM        | NEG         |
| #91        | Klebsiella pneumoniae         | 29/01/2015 | Mouth Swab | NDM        | NEG         |
| #92        | Klebsiella pneumoniae         | 20/04/2015 | Rectal Swab | NDM        | NEG         |
| #93        | Klebsiella pneumoniae         | 10/05/2015 | Perineum Swab | NDM        | NEG         |
| #94        | Klebsiella pneumoniae         | 07/01/2016 | Rectal Swab | OXA48       | NEG         |
| #95        | Klebsiella pneumoniae         | 02/07/2014 | MSU    | OXA48        | NEG         |
| #96        | Klebsiella pneumoniae         | 22/01/2015 | Drain Fluid Abdomen | OXA48 | NEG         |
| #97        | Klebsiella pneumoniae         | 28/12/2015 | Nose/axilla/groin | NDM and OXA48 | NEG         |
| #98        | Klebsiella pneumoniae         | 17/02/2015 | Wound Swab (Leg R) | NDM and OXA48 | NEG         |
| #99        | Klebsiella pneumoniae         | 09/12/2014 | Perineum swab | NDM        | NEG         |
| #100       | Klebsiella pneumoniae         | 20/04/2015 | Rectal Swab | NDM        | NEG         |
| #101       | Klebsiella pneumoniae         | 15/04/2015 | Rectal Swab | NDM        | NEG         |
| #102       | Klebsiella pneumoniae         | 07/05/2015 | Perineum Swab | NDM        | NEG         |
| #103       | Klebsiella pneumoniae         | 23/03/2018 | Sputum | NDM          | NEG         |
| #104       | Klebsiella pneumoniae         | 29/04/2015 | Rectal Swab | NDM        | NEG         |
| #105       | Klebsiella pneumoniae         | 02/07/2014 | Catheter Urine | NDM        | NEG         |
| #106       | Klebsiella pneumoniae         | 08/03/2015 | Clean catch urine | NDM        | NEG         |
| #107       | Klebsiella pneumoniae         | 10/04/2015 | Urine | NDM          | NEG         |
| #108       | Klebsiella pneumoniae         | 19/04/2015 | Perineum Swab | NDM        | NEG         |
| #109       | Klebsiella pneumoniae         | 17/05/2015 | Rectal Swab | NDM        | NEG         |
| #110       | Klebsiella pneumoniae         | 03/10/2015 | Rectal Swab | NDM        | NEG         |
| #111       | Klebsiella pneumoniae         | 16/08/2015 | Rectal Swab | NDM        | NEG         |
| #112       | Klebsiella pneumoniae         | 19/04/2015 | Wound Swab (Groin) | NDM        | NEG         |
| #113       | Klebsiella pneumoniae         | 16/09/2015 | Rectal Swab | NDM        | NEG         |
| #114       | Klebsiella pneumoniae         | 07/06/2015 | Rectal Swab | NDM        | NEG         |
| #115       | Klebsiella pneumoniae         | 07/07/2015 | Rectal Swab | NDM        | NEG         |
| #116       | Klebsiella pneumoniae         | 03/06/2015 | Rectal Swab | NDM        | NEG         |
| #117       | Klebsiella pneumoniae         | 20/05/2015 | Rectal Swab | NDM        | NEG         |
| #118       | Klebsiella pneumoniae         | 29/07/2015 | RT Foot Tissue | NDM        | NEG         |
| #119       | Klebsiella pneumoniae         | 10/08/2015 | Rectal Swab | NDM        | NEG         |
| #120       | Klebsiella pneumoniae         | 12/07/2015 | Perineum Swab | NDM        | NEG         |
| #121       | Klebsiella pneumoniae         | 21/07/2015 | Rectal Swab | NDM        | NEG         |
| #122       | Klebsiella sp.               | 15/12/2015 | Faeces | OXA48        | NEG         |
| #123       | Proteus mirabilis            | 07/02/2014 | Catheter Urine | OXA48       | NEG         |
| #124       | Pseudomonas aeruginosa       | 25/03/2015 | Wound Swab Flank R | VIM        | NEG         |
| #125       | Pseudomonas aeruginosa       | 01/11/2013 | Sputum | VIM          | NEG         |
| #126       | Pseudomonas aeruginosa       | 31/03/2015 | Throat swab | IMP        | NEG         |
| #127       | Serratia marcescens          | 10/10/2017 | Rectal Swab | KPC        | NEG         |
| #128       | Serratia marcescens          | 28/01/2015 | Bone (Tibia L) | OXA48       | NEG         |

All samples were negative for mcr-1 to mcr-8 by PCR.
Table S4. Bacterial isolated analyzed by LoC platform.

| Isolate ID | Bacterial strains        | Collected   | Carbapenemase | eLAMP (TTP) | WGS  |
|------------|--------------------------|-------------|---------------|-------------|------|
| #04        | Citrobacter freundii     | 19/08/2017  | IMP1          | POS (6.80 min) | POS  |
| #05        | Enterobacter bugandensis | 12/06/2017  | IMP1          | POS (7.40 min) | POS  |
| #10        | Enterobacter cloacae     | 11/10/2017  | IMP1          | NEG         | POS  |
| #11        | Enterobacter cloacae     | 20/11/2017  | IMP1          | NEG         | NEG  |
| #13        | Enterobacter cloacae     | 06/02/2018  | IMP1          | POS (7.63 min) | POS  |
| #14        | Enterobacter cloacae     | 06/02/2018  | IMP1          | POS (5.73 min) | POS  |
| #23        | Enterobacter cloacae     | 13/03/2019  | IMP1          | NEG         | NEG  |
| #24        | Enterobacter cloacae     | 25/03/2019  | IMP1          | POS (6.57 min) | POS  |
| #26        | Enterobacter hormaechei  | 15/12/2016  | IMP1          | POS (7.37 min) | POS  |
| #28        | Enterobacter hormaechei  | 26/07/2017  | IMP1          | POS (8.83 min) | POS  |
| #34        | Enterobacter sp.         | 08/05/2019  | IMP1          | NEG         | NEG  |
| #37        | Escherichia coli         | 08/02/2018  | IMP1          | POS (6.88 min) | POS  |
| #41        | Klebsiella aerogenes     | 27/02/2019  | IMP1          | POS (6.88 min) | POS  |
| #45        | Klebsiella pneumoniae    | 23/07/2017  | IMP1          | POS (6.25 min) | POS  |
| #46        | Klebsiella pneumoniae    | 09/09/2017  | IMP1          | POS (6.58 min) | POS  |
| #47        | Klebsiella pneumoniae    | 19/09/2017  | IMP1          | NEG         | NEG  |
| #49        | Klebsiella pneumoniae    | 28/01/2018  | IMP1          | NEG         | NEG  |
| #51        | Klebsiella pneumoniae    | 09/04/2018  | IMP1          | POS (5.30 min) | POS  |
| #53        | Klebsiella pneumoniae    | 10/09/2018  | IMP1          | POS (5.87 min) | POS  |
| #55        | Pseudomonas aeruginosa   | 20/11/2018  | IMP1          | POS (7.78 min) | POS  |
Table S5. Nucleotide sequences for synthetic double-stranded DNA containing mcr-1 to mcr-9 targets.

| gBlock ID       | Sequence (5’-3’)                                                                 |
|-----------------|-----------------------------------------------------------------------------------|
| KP347127.1_mcr-1.1 | ATGATGCAGCAGCATCTTTGTGATCGACCGCCGCTGTTTTCATTTTTGGAATTAATATCGCCGAGTTATGATGACGGG |
|                 | GATGTTATGCACTTACCTACCTGCGGACATTTTACCTCTTCTTTGACGCAATTATGATGAGGAGGAGGAATTGATG |
| LT598652.1_mcr-2.1 | ATGACATCAGTCTGTGATCGCGTATCTGACATCTTTTTTGCGATGAGGAGGAGGAGGAATTGATGACGGG       |
|                 | GATGTTATGCACTTACCTACCTGCGGACATTTTACCTCTTCTTTGACGCAATTATGATGAGGAGGAGGAATTGATG |
| KY924928.1_mcr-3.1 | ATGCGTTCCCTATTTAATAAAATAATGGTTGGCTGTTAATGCTGAGTCTGGTTATGAGGAGGAGGAGGAATTGATG |
|                 | GATGTTATGCACTTACCTACCTGCGGACATTTTACCTCTTCTTTGACGCAATTATGATGAGGAGGAGGAATTGATG |
|                 | GATGTTATGCACTTACCTACCTGCGGACATTTTACCTCTTCTTTGACGCAATTATGATGAGGAGGAGGAATTGATG |
Table S6. Accession numbers list of genomes used in the alignment for LAMP primer design.

| Accession numbers (mcr gene variants) | Accession numbers (mcr gene variants) | Accession numbers (mcr gene variants) |
|---------------------------------------|---------------------------------------|---------------------------------------|
| KP347127.1 (mcr-1.1)                  | LT598652.1 (mcr-2.1)                  | MG564491.1 (mcr-3.12)                 |
| KX236309.1 (mcr-1.2)                  | MF176239.1 (mcr-2.2)                  | MG822663.1 (mcr-4.2)                  |
| KU934208.1 (mcr-1.3)                  | KY924928.1 (mcr-3.1)                  | MG822665.1 (mcr-4.4)                  |
| KY041856.1 (mcr-1.4)                  | NMWW01000143.1 (mcr-3.2)              | MG822664.1 (mcr-4.5)                  |
| KY283125.1 (mcr-1.5)                  | MF495680.1 (mcr-3.3)                  | MF543359.1 (mcr-4.1)                  |
| KY352406.1 (mcr-1.6)                  | FLXA01000011.1 (mcr-3.4)              | MG026621.1 (mcr-4.3)                  |
| KY488488.1 (mcr-1.7)                  | MF489760.1 (mcr-3.5)                  | KY807921.1 (mcr-5.1)                  |
| KY683842.1 (mcr-1.8)                  | MF598076.1 (mcr-3.6)                  | MG384740.1 (mcr-5.2)                  |
| KY964067.1 (mcr-1.9)                  | MF598077.1 (mcr-3.7)                  | MF176240.1 (mcr-6.1)                  |
| MF176238.1 (mcr-1.10)                 | MF598078.1 (mcr-3.8)                  | MG267386.1 (mcr-7.1)                  |
| KY853650.2 (mcr-1.11)                 | MF598080.1 (mcr-3.9)                  | MG736312.1 (mcr-8.1)                  |
| LC337668.1 (mcr-1.12)                 | MG214531.1 (mcr-3.10)                 | NG064792.1 (mcr-9.1)                  |
| MG384739.1 (mcr-1.13)                 | MG489958.1 (mcr-3.11)                 | MK791138.1 (mcr-9.1)                  |

https://www.ncbi.nlm.nih.gov/genbank/ (last accessed March 29, 2020)
Figure S1. Chip output obtained during amplification for positive isolates.

# Isolate ID.
Figure S2. Drift compensation for positive isolates.

# Isolate ID.
Figure S3. Linearization, normalization and sigmoidal fitting for positive isolates.

#: Isolate ID.
Figure S4. Data processing for negative isolates.

**Raw output**

| Isolate ID | Voltage [mV] | Time [min] |
|------------|--------------|------------|
| #5         | 180          | 0          |
| #11        | 260          | 0          |
| #23        | 420          | 0          |
| #34        | 140          | 0          |
| #47        | 160          | 0          |
| #49        | 420          | 0          |

**Normalized data**

| Isolate ID | Voltage [mV] | Time [min] |
|------------|--------------|------------|
| #5         | 1            | 0          |
| #11        | 1            | 0          |
| #23        | 1            | 0          |
| #34        | 1            | 0          |
| #47        | 1            | 0          |
| #49        | 1            | 0          |

#: Isolate ID.
Figure S5. Annotated photograph of the LoC platform without the case.