Supplementary information for

**Crash landing of *Vibrio cholerae* by MSHA pili-assisted braking and anchoring in a viscoelastic environment**

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**This file includes:**

Tables S1

**Table S1. Plasmids and primers used in this study.**

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| **Plasmids** | **Description** | **Source or reference** |
| pWM91pML3  | Suicide vectorpWM-FlaAA106C | *(Metcalf et al., 1996)*This study |
| pML4 | pWM-FlaAS107C | This study |
| pML5 | pWM-FlaAA106CS107C | This study |
| **Primer Name** | **Primer Sequence (5'→ 3')** | **Description** |
| VC0409-F1 | CTTGTATGGCGCACTCAACG | *mshA* knockout |
| VC0409-R1-3S | CAGCGCTAATTCAGTTTAAGCGGCCATAGCTACGCAGCATTACTGCAAGG | *mshA* knockout |
| VC0409-F2-3S | GCTATGGCCGCTTAAACTGAATTAGCGCTGCGTTATACAGCTGCAACCTC | *mshA* knockout |
| VC0409-R2 | CAAGCATAGCCTTGCTGTTC | *mshA* knockout |
| VC0409-Mut-T70C-R1 | GTCTAAACATTCAATGCCTTTAATTGCAGCTCGTCC | MshAT70C construction |
| VC0409-Mut-T70C-F2 | GGCATTGAATGTTTAGACTACACAGCATATAC | MshAT70C construction |
| VC0409-Mut-Seq-F1 | GGCGAAGAAAGCCAGTATTG | MshAT70C detection |
| VC0409-Mut-Seq-R1 | CCTGCGGAGAAACTTGAATG | MshAT70C detection |
| VC2188-F1 | CCATGAGACGGTTCGTTTAC | *flaA* knockout |
| VC2188-R1-3S | CAGCGCTAATTCAGTTTAAGCGGCCATAGCGATAACGTTGTGCGGTCATC | *flaA* knockout |
| VC2188-F2-3S | GCTATGGCCGCTTAAACTGAATTAGCGCTGCAGTAGTTCACGGTACCTTC | *flaA* knockout |
| VC2188-R2 | CCAAAGATGCCGGTAAATGG | *flaA* knockout |
| VC2188-Mut-F1 | CACACTTTGGTTTCCGGTAC | FlaA mutations construction |
| VC2188-Mut-R2 | TCCGCACCATTATTGAGAGC | FlaA mutations construction |
| VC2188-Mut-A106C-R1 | TGACGCTCTGAACATGAGTTGGTACCGTTCGCCGA | FlaAA106C construction |
| VC2188-Mut-A106C-F2 | AACGGTACCAACTCATGTTCAGAGCGTCAGGCTC | FlaAA106C construction |
| VC2188-Mut-S107C-R1 | TGACGCTCACACGCTGAGTTGGTACCGTTCGCCGAT | FlaAS107C construction |
| VC2188-Mut-S107C-F2 | AACGGTACCAACTCAGCGTGTGAGCGTCAGGCTCTG | FlaAS107C construction |
| VC2188-Mut-A106C-S107C-R1 | TGACGCTCACAACATGAGTTGGTACCGTTCGCCGAT | FlaAA106CS107C construction |
| VC2188-Mut-A106C-S107C-F2 | AACGGTACCAACTCATGTTGTGAGCGTCAGGCTCTG | FlaAA106CS107C construction |
| VC2188-Mut-E332C-R1 | CGACGCACACACGTTCTCCTGAATATTCGACAG | FlaAE332C construction |
| VC2188-Mut-E332C-F2 | ATATTCAGGAGAACGTGTGTGCGTCGAAAAGTC | FlaAE332C construction |
| VC2188-Mut-G23C-R1 | GTTAAGCTCACACGTCGCCTTGGTCAGATAACGTTGTG | FlaAG23C construction |
| VC2188-Mut-G23C-F2 | TATCTGACCAAGGCGACGTGTGAGCTTAACACCTCCA | FlaAG23C construction |
| VC2188-Mut-N26C-R1 | TCCATGGAGGTACAAAGCTCTCCCGTCGCCTTGGT | FlaAN26C construction |
| VC2188-Mut-N26C-F2 | ACGGGAGAGCTTTGTACCTCCATGGAACGCCTCTCA | FlaAN26C construction |
| VC2188-Mut-N83C-R1 | GTCGATTCACACATCGCACCTTCTGCGGTTTGAG | FlaAN83C construction |
| VC2188-Mut-N83C-F2 | AGAAGGTGCGATGTGTGAATCGACCAGCATTTTGCAGC | FlaAN83C construction |
| VC2188-Mut-S325C-R1 | GTTCTCCTGAATATTACACAGGTTACTGATGCTGTGAC | FlaAS325C construction |
| VC2188-Mut-S325C-F2 | ATCAGTAACCTGTGTAATATTCAGGAGAACGTGGAAGCGTC | FlaAS325C construction |
| VC2188-Mut-S87C-R1 | CGCTGCAAAATACAGGTCGATTCATTCATCGCACCT | FlaAS87C construction |
| VC2188-Mut-S87C-F2 | GAATCGACCTGTATTTTGCAGCGTATGCGTGACCTC | FlaAS87C construction |
| VC2188-Mut-S376C-R1 | GTGAACTACTGCAATAAACAGATTGCAGAGTTTGGC | FlaAS376C construction |
| VC2188-Mut-S376C-F2 | TGCAATCTGTTTATTGCAGTAGTTCACGGTACCTTC | FlaAS376C construction |
| VC2188-Mut-V117C-R1 | ATCTTGCAGTGCACACGACTCTTCATTCAGAGCCTG | FlaAV117C construction |
| VC2188-Mut-V117C-F2 | GAAGAGTCGTGTGCACTGCAAGATGAACTGAACCGTA | FlaAV117C construction |
| VC2188-Mut-Seq-F1 | TGAGCTTGCGAACTCGATAG | FlaA mutations detection |
| VC2188-Mut-Seq-R1 | CGTTCTTCAGCGGATGATAG | FlaA mutations detection |