

## Supplementary information

### **Multilocus sequence analysis reveals high genetic diversity in clinical isolates of *Burkholderia cepacia* complex from India**

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### Supplementary Table 1

*Burkholderia cepacia* complex (Bcc) strain collection used in this study, their isolation details along with allelic profiles and sequence type identified.

|    | Isolate ID | Source | Year | RFLP | Location | <i>atpD</i> | <i>gltB</i> | <i>gyrB</i> | <i>recA</i> | <i>lepA</i> | <i>phaC</i> | <i>trpB</i> | ST  |
|----|------------|--------|------|------|----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----|
| 1  | 29522      | Blood  | 2011 | G    | PGIMER   | 131         | 11          | 487         | 14          | 11          | 6           | 79          | 628 |
| 2  | 33505      | Blood  | 2011 | G    | PGIMER   | 131         | 11          | 487         | 14          | 11          | 6           | 79          | 628 |
| 3  | 22162      | Blood  | 2007 | G    | PGIMER   | 131         | 11          | 487         | 14          | 11          | 6           | 79          | 628 |
| 4  | 9500       | Blood  | 2007 | G    | PGIMER   | 131         | 11          | 487         | 14          | 11          | 6           | 79          | 628 |
| 5  | 1309       | Respi  | 2011 | G    | PGIMER   | 131         | 11          | 487         | 14          | 11          | 6           | 79          | 628 |
| 6  | 1288       | Respi  | 2011 | G    | PGIMER   | 131         | 11          | 487         | 14          | 11          | 6           | 79          | 628 |
| 7  | 4654       | Respi  | 2010 | G    | PGIMER   | 131         | 11          | 487         | 14          | 11          | 6           | 79          | 628 |
| 8  | 25980      | Blood  | 2010 | G    | PGIMER   | 15          | 11          | 487         | 14          | 11          | 6           | 79          | 839 |
| 9  | 30379      | Blood  | 2011 | G    | PGIMER   | 15          | 11          | 487         | 14          | 11          | 6           | 79          | 839 |
| 10 | 30380      | Blood  | 2011 | G    | PGIMER   | 15          | 11          | 487         | 14          | 11          | 6           | 79          | 839 |
| 11 | 30879      | Blood  | 2011 | G    | PGIMER   | 15          | 11          | 487         | 14          | 11          | 6           | 79          | 839 |
| 12 | 31369      | Blood  | 2011 | G    | PGIMER   | 15          | 11          | 487         | 14          | 11          | 6           | 79          | 839 |
| 13 | 32670      | Blood  | 2011 | W    | PGIMER   | 131         | 394         | 585         | 14          | 11          | 6           | 79          | 827 |
| 14 | 15 ED      | Blood  | 2008 | G    | FEHI     | 131         | 11          | 187         | 143         | 11          | 6           | 79          | 843 |
| 15 | 2 ED       | Blood  | 2008 | G    | FEHI     | 15          | 11          | 187         | 143         | 11          | 6           | 79          | 232 |
| 16 | 8 ED       | Blood  | 2008 | G    | FEHI     | 15          | 11          | 187         | 143         | 11          | 6           | 79          | 232 |
| 17 | 20 ED      | Blood  | 2008 | G    | FEHI     | 15          | 11          | 187         | 143         | 11          | 6           | 79          | 232 |
| 18 | 31 ED      | Blood  | 2008 | G    | FEHI     | 15          | 11          | 187         | 143         | 11          | 6           | 79          | 232 |
| 19 | 44 ED      | Blood  | 2008 | G    | FEHI     | 15          | 11          | 187         | 143         | 11          | 6           | 79          | 232 |
| 20 | 23186      | Blood  | 2007 | G    | PGIMER   | 131         | 11          | 174         | 14          | 11          | 6           | 79          | 217 |
| 21 | 64329      | Blood  | 2012 | G    | GHH      | 131         | 11          | 174         | 14          | 11          | 6           | 79          | 217 |
| 22 | 7055       | Blood  | 2010 | G    | PGIMER   | 15          | 11          | 582         | 14          | 11          | 6           | 147         | 826 |
| 23 | 7716       | Respi  | 2010 | G    | PGIMER   | 15          | 11          | 582         | 14          | 11          | 6           | 147         | 826 |
| 24 | 32127      | Blood  | 2012 | G    | PGIMER   | 131         | 11          | 230         | 14          | 11          | 6           | 358         | 709 |
| 25 | 32358      | Blood  | 2012 | W    | PGIMER   | 131         | 11          | 230         | 14          | 11          | 6           | 358         | 709 |
| 26 | 31674      | Blood  | 2012 | G    | PGIMER   | 131         | 11          | 230         | 14          | 11          | 6           | 358         | 709 |

|    |       |       |      |     |            |     |     |     |     |    |     |     |     |
|----|-------|-------|------|-----|------------|-----|-----|-----|-----|----|-----|-----|-----|
| 27 | 4671  | Fluid | 2010 | G   | PGIMER     | 15  | 11  | 581 | 14  | 11 | 141 | 79  | 824 |
| 28 | BMU   | Urine | 2012 | G   | TNMC & BYL | 15  | 11  | 581 | 14  | 11 | 141 | 79  | 824 |
| 29 | 18963 | Blood | 2010 | G   | PGIMER     | 15  | 394 | 184 | 14  | 11 | 6   | 79  | 832 |
| 30 | 18965 | Blood | 2010 | G   | PGIMER     | 15  | 394 | 184 | 14  | 11 | 6   | 79  | 832 |
| 31 | 2722  | Pus   | 2009 | G   | PGIMER     | 340 | 11  | 442 | 14  | 11 | 6   | 79  | 829 |
| 32 | 22565 | Blood | 2005 | G   | PGIMER     | 16  | 11  | 179 | 14  | 11 | 120 | 79  | 208 |
| 33 | 49365 | Blood | 2012 | W   | GHH        | 15  | 11  | 481 | 14  | 11 | 6   | 147 | 621 |
| 34 | 551   | ETA   | 2012 | G   | PGIMER     | 16  | 11  | 271 | 143 | 11 | 6   | 147 | 807 |
| 35 | 1125  | Blood | 2010 | G   | PGIMER     | 16  | 11  | 271 | 143 | 11 | 6   | 147 | 807 |
| 36 | 1626  | Blood | 2011 | G   | PGIMER     | 16  | 11  | 271 | 143 | 11 | 6   | 147 | 807 |
| 37 | 2321  | ETA   | 2012 | G   | PGIMER     | 16  | 11  | 271 | 143 | 11 | 6   | 147 | 807 |
| 38 | 29416 | Blood | 2009 | G   | PGIMER     | 16  | 11  | 271 | 143 | 11 | 6   | 147 | 807 |
| 39 | 31759 | Blood | 2011 | G   | PGIMER     | 16  | 11  | 271 | 143 | 11 | 6   | 147 | 807 |
| 40 | 32447 | Blood | 2012 | G   | PGIMER     | 16  | 11  | 271 | 143 | 11 | 6   | 147 | 807 |
| 41 | 35238 | Blood | 2012 | G   | PGIMER     | 16  | 11  | 271 | 143 | 11 | 6   | 147 | 807 |
| 42 | 1168  | Respi | 2011 | G   | PGIMER     | 15  | 11  | 580 | 14  | 11 | 6   | 147 | 822 |
| 43 | 31704 | Blood | 2011 | G   | PGIMER     | 15  | 11  | 487 | 14  | 11 | 6   | 79  | 839 |
| 44 | 7216  | Blood | 2010 | Neg | PGIMER     | 15  | 11  | 582 | 14  | 11 | 6   | 147 | 826 |
| 45 | 1236  | Respi | 2010 | I   | PGIMER     | 16  | 16  | 588 | 19  | 68 | 278 | 13  | 828 |
| 46 | 7142  | Blood | 2006 | AN  | PGIMER     | 15  | 394 | 184 | 14  | 11 | 6   | 79  | 832 |
| 47 | 4613  | Blood | 2010 | E   | PGIMER     | 339 | 393 | 587 | 37  | 1  | 93  | 48  | 825 |
| 48 | 31178 | Blood | 2011 | W   | PGIMER     | 91  | 93  | 96  | 103 | 42 | 1   | 21  | 9   |
| 49 | 5310  | Blood | 2010 | E   | PGIMER     | 339 | 393 | 587 | 37  | 1  | 93  | 48  | 825 |
| 50 | 5312  | Blood | 2010 | E   | PGIMER     | 339 | 393 | 587 | 37  | 1  | 93  | 48  | 825 |
| 51 | 8947  | Blood | 2007 | E   | PGIMER     | 66  | 109 | 49  | 3   | 3  | 40  | 53  | 6   |
| 52 | 66992 | Blood | 2012 | W   | GHH        | 1   | 386 | 344 | 3   | 3  | 1   | 53  | 840 |
| 53 | BC-3  | Blood | 2012 | G   | TNMC & BYL | 15  | 11  | 593 | 11  | 6  | 14  | 79  | 841 |
| 54 | BC-19 | Blood | 2012 | Neg | TNMC & BYL | 15  | 11  | 581 | 14  | 11 | 141 | 79  | 824 |
| 55 | BC-21 | Blood | 2012 | G   | TNMC & BYL | 15  | 11  | 581 | 14  | 11 | 141 | 79  | 824 |
| 56 | BC-40 | Blood | 2012 | Neg | TNMC & BYL | 15  | 11  | 581 | 14  | 11 | 141 | 79  | 824 |
| 57 | BC-41 | Blood | 2012 | Neg | TNMC & BYL | 15  | 11  | 581 | 14  | 11 | 141 | 79  | 824 |



### Supplementary Table 3

List of reference strains of Bcc members and their sequence types used in MLSA analysis.

| Sr. No | Species name                                     | Sequence Type |
|--------|--|---------------|
| 1)     | <i>B. cepacia</i> ATCC 25416 <sup>T</sup>        | ST-10         |
| 2)     | <i>B. cenocepacia</i> J2315 <sup>T</sup>         | ST-28         |
| 3)     | <i>B. ambifaria</i> AMMD <sup>T</sup>            | ST-77         |
| 4)     | <i>B. multivorans</i> LMG 13010 <sup>T</sup>     | ST-397        |
| 5)     | <i>B. dolosa</i> AU0645 <sup>T</sup>             | ST-72         |
| 6)     | <i>B. vietnamiensis</i> LMG 10929 <sup>T</sup>   | ST-65         |
| 7)     | <i>B. pyrrocinia</i> ATCC 15958 <sup>T</sup>     | ST-41         |
| 8)     | <i>B. ubonensis</i> LMG 20358 <sup>T</sup>       | ST-299        |
| 9)     | <i>B. stabilis</i> LMG 14294 <sup>T</sup>        | ST-50         |
| 10)    | <i>B. anthina</i> LMG 20980 <sup>T</sup>         | ST-86         |
| 11)    | <i>B. contaminans</i> LMG 20980 <sup>T</sup>     | ST-102        |
| 12)    | <i>B. lata</i> ATCC 17760 <sup>T</sup>           | ST-101        |
| 13)    | <i>B. diffusa</i> LMG 24065 <sup>T</sup>         | ST-164        |
| 14)    | <i>B. latens</i> LMG 24064 <sup>T</sup>          | ST-104        |
| 15)    | <i>B. arboris</i> ES0263A <sup>T</sup>           | ST-492        |
| 16)    | <i>B. Seminalis</i> AU0475 <sup>T</sup>          | ST-473        |
| 17)    | <i>B. metallica</i> AU0553 <sup>T</sup>          | ST-511        |
| 18)    | <i>B. pseudomultivorance</i> AU3207 <sup>T</sup> | ST-511        |
| 19)    | <i>B. stagnalis</i> LMG 285156 <sup>T</sup>      | ST-787        |
| 20)    | <i>B. territorii</i> LMG 28158 <sup>T</sup>      | ST-791        |

#### Supplementary Table 4

Primer sequences with annealing temperatures used for the amplification and sequencing of seven MLST loci of *Burkholderia cepacia complex* isolates.

| <b>MLST Locus</b> | <b>Amplicon size (bp)</b> | <b>Primer sequence (5' - 3')</b>                     | <b>Annealing temp (°C)</b> |
|-------------------|---------------------------|--|----------------------------|
| <i>atpD</i>       | 756                       | ATGAGTACTRCTGCTTTGGTAGAAGG<br>CGTGAAACGGTAGATGTTGTCG | 55                         |
| <i>gltB</i>       | 652                       | CTGCATCATGATGCGCAAGTG<br>CTTGCCGCGGAARTCGTTGG        | 60                         |
| <i>gyrB</i>       | 738                       | ACCGGTCTGCAYCACCTCGT<br>YTCGTTGWARCTGTCGTTCCACTGC    | 60                         |
| <i>lepA</i>       | 975                       | CTSATCATCGAYTCSTGGTTCG<br>CGRTATTCCTTGAACTCGTARTCC   | 55                         |
| <i>phaC</i>       | 525                       | GCACSAGYATYTGCCAGCG<br>CCATSTCSGTRCCRATGTAGCC        | 60                         |
| <i>recA</i>       | 704                       | AGGACGATTCATGGAAGAWAGC<br>GACGCACYGAYGMRTAGAACTT     | 60                         |
| <i>trpB</i>       | 787                       | CGCGYTTTCGGVATGGARTG<br>ACSGTRTGCATGTCCTTGTCG        | 60                         |