











| M6: Pairwise Distances (C:\Users\Lenovo\AppData\Local\Temp\PhyloAnalysis-16.meg)  |   |   |   |   |   |   |   |   |   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
|---|---|---|---|---|---|---|---|---|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| File  | Display   | Average   | Caption   | Help  |   |   |   |   |   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
|  |  |  |  |  |  |  |  |  |  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
|   |   |   |   |   |   |   |   |   |   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 1. kerS26   |   |   |   |   |   |   |   |   |   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 2. kerS26uv   | 0.000   |   |   |   |   |   |   |   |   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 3. KerS13   | 0.009   | 0.009   |   |   |   |   |   |   |   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 4. KerS13uv   | 0.009   | 0.009   | 0.000   |   |   |   |   |   |   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 5. KerS13uv/ems   | 0.013   | 0.013   | 0.004   | 0.004   |   |   |   |   |   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 6. KerS15   | 0.009   | 0.009   | 0.000   | 0.000   | 0.004   |   |   |   |   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 7. KerS15ems  | 0.009   | 0.009   | 0.000   | 0.000   | 0.004   | 0.000   |   |   |   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 8. KerS39   | 0.013   | 0.013   | 0.004   | 0.004   | 0.000   | 0.004   | 0.004   |   |   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 9. KerS39ems  | 0.009   | 0.009   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000   | 0.004   |   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 10. KerS1   | 0.009   | 0.009   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000   | 0.004   | 0.000   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 11. KerS1ems  | 0.009   | 0.009   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 12. WP 000790934.1  | 0.013   | 0.013   | 0.004   | 0.004   | 0.000   | 0.004   | 0.004   | 0.000   | 0.004   | 0.004 | 0.004 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 13. WP 061129616.1  | 0.013   | 0.013   | 0.004   | 0.004   | 0.000   | 0.004   | 0.004   | 0.000   | 0.004   | 0.004 | 0.004 | 0.000 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 14. WP 000790931.1  | 0.009   | 0.009   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000 | 0.000 | 0.004 | 0.004 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 15. WP 048539223.1  | 0.009   | 0.009   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000 | 0.000 | 0.004 | 0.004 | 0.000 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 16. WP 171484091.1  | 0.009   | 0.009   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000 | 0.000 | 0.004 | 0.004 | 0.000 | 0.000 |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 17. WP 076873679.1  | 0.013   | 0.013   | 0.004   | 0.004   | 0.009   | 0.004   | 0.004   | 0.009   | 0.004   | 0.004 | 0.004 | 0.009 | 0.009 | 0.004 | 0.004 | 0.004 |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 18. WP 076868061.1  | 0.009   | 0.009   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000 | 0.000 | 0.004 | 0.004 | 0.004 | 0.000 | 0.000 | 0.000 | 0.004 |       |       |       |       |       |       |       |       |       |       |  |
| 19. WP 000790930.1  | 0.009   | 0.009   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000 | 0.000 | 0.004 | 0.004 | 0.000 | 0.000 | 0.000 | 0.000 | 0.004 | 0.000 |       |       |       |       |       |       |       |       |       |  |
| 20. MBL3821420.1  | 0.009   | 0.009   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000 | 0.000 | 0.004 | 0.004 | 0.004 | 0.000 | 0.000 | 0.000 | 0.004 | 0.000 | 0.000 |       |       |       |       |       |       |       |       |  |
| 21. WP 074610243.1  | 0.009   | 0.009   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000   | 0.004   | 0.000   | 0.000 | 0.000 | 0.004 | 0.004 | 0.004 | 0.000 | 0.000 | 0.000 | 0.004 | 0.000 | 0.000 | 0.000 |       |       |       |       |       |       |       |  |
| 22. WP 078420647.1  | 0.000   | 0.000   | 0.009   | 0.009   | 0.013   | 0.009   | 0.009   | 0.013   | 0.009   | 0.009 | 0.009 | 0.013 | 0.013 | 0.009 | 0.009 | 0.009 | 0.013 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 |       |       |       |       |       |       |  |
| 23. WP 000790938.1  | 0.004   | 0.004   | 0.004   | 0.004   | 0.009   | 0.004   | 0.004   | 0.009   | 0.004   | 0.004 | 0.004 | 0.009 | 0.009 | 0.004 | 0.004 | 0.004 | 0.009 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |       |       |       |       |       |  |
| 24. WP 000790937.1  | 0.004   | 0.004   | 0.004   | 0.004   | 0.009   | 0.004   | 0.004   | 0.009   | 0.004   | 0.004 | 0.004 | 0.009 | 0.009 | 0.004 | 0.004 | 0.004 | 0.009 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.000 |       |       |       |       |  |
| 25. WP 088859495.1  | 0.004   | 0.004   | 0.004   | 0.004   | 0.009   | 0.004   | 0.004   | 0.009   | 0.004   | 0.004 | 0.004 | 0.009 | 0.009 | 0.004 | 0.004 | 0.004 | 0.009 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 | 0.000 | 0.000 |       |       |       |       |  |
| 26. WP 065211756.1  | 0.009   | 0.009   | 0.009   | 0.009   | 0.013   | 0.009   | 0.009   | 0.013   | 0.009   | 0.009 | 0.009 | 0.013 | 0.013 | 0.009 | 0.009 | 0.009 | 0.013 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.004 | 0.004 | 0.004 |       |       |       |  |
| 27. WP 086395645.1  | 0.009   | 0.009   | 0.009   | 0.009   | 0.013   | 0.009   | 0.009   | 0.013   | 0.009   | 0.009 | 0.009 | 0.013 | 0.013 | 0.009 | 0.009 | 0.009 | 0.013 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.004 | 0.004 | 0.004 | 0.009 |       |       |  |
| 28. WP 006918592.1  | 0.009   | 0.009   | 0.009   | 0.009   | 0.013   | 0.009   | 0.009   | 0.013   | 0.009   | 0.009 | 0.009 | 0.013 | 0.013 | 0.009 | 0.009 | 0.009 | 0.013 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.004 | 0.004 | 0.004 | 0.009 | 0.009 |       |  |
| 29. WP 153581315.1  | 0.009   | 0.009   | 0.009   | 0.009   | 0.013   | 0.009   | 0.009   | 0.013   | 0.009   | 0.009 | 0.009 | 0.013 | 0.013 | 0.009 | 0.009 | 0.009 | 0.013 | 0.009 | 0.009 | 0.009 | 0.009 | 0.009 | 0.004 | 0.004 | 0.004 | 0.009 | 0.009 | 0.009 |  |
| 30. WP 098771659.1  | 0.004   | 0.004   | 0.004   | 0.004   | 0.009   | 0.004   | 0.004   | 0.009   | 0.004   | 0.004 | 0.004 | 0.009 | 0.009 | 0.004 | 0.004 | 0.004 | 0.009 | 0.004 | 0.004 | 0.004 | 0.004 | 0.000 | 0.000 | 0.000 | 0.004 | 0.004 | 0.004 | 0.004 |  |

**Figure S4.** Estimates of evolutionary divergence of *KerS* gene against S8 family peptidase, *Bacillus cereus* group sequences retrieved from GenBank database.