

Genome Sequence of *Bacillus anthracis* Strain Tangail-1 from Bangladesh

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Soil was collected in July 2013 at a site where a cow infected with anthrax had been the month before. Selective culturing yielded *Bacillus anthracis* strain Tangail-1. Here, we report the draft genome sequence of this *Bacillus anthracis* isolate that belongs to the canonical A.Br.001/002 clade.

Received 3 June 2016 Accepted 6 June 2016 Published 28 July 2016

Citation Rume FI, Antwerpen M, Braun P, Biswas PK, Yasmin M, Grass G, Ahsan CR, Hanczaruk M. 2016. Genome sequence of *Bacillus anthracis* strain Tangail-1 from Bangladesh. *Genome Announc* 4(4):e00748-16. doi:10.1128/genomeA.00748-16.

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In Bangladesh, the zoonotic disease anthrax caused by *Bacillus anthracis* is enzootic in various districts of the country (1). For example, from 2008 to 2009 there were a total of 886 registered animal cases and between 18 August and 2 October 2010 alone, 607 human cases were reported (2). In May 2013 an outbreak among livestock occurred in Sadar (Dhaka division), a sub-district of Tangail located in central Bangladesh as published in ProMED-mail (archive 20130517.1720541), where multiple animal cases are typically reported each year. In September 2013, a site from a cowshed housing several healthy cows was sampled and soil from 5 cm depth withdrawn for cultivation. Isolation of live *B. anthracis* was accomplished using the ground anthrax bacillus refined isolation (GABRI) method published previously (3).

Strain Tangail-1 harbored both *B. anthracis* virulence plasmids pXO1 and pXO2 as confirmed by real-time PCR assays (4, 5). Genotyping based on canonical single-nucleotide polymorphism (canSNP) (6) grouped strain Tangail-1 into the A.Br.001/002 branch, which has previously been isolated in Bangladesh (2) and other South Asian countries including China (6, 7), and Central Europe (8, 9). Notably, this canSNP-group of *B. anthracis* seems to be predominant in Bangladesh (1, 2).

Whole-genome shotgun (WGS) sequencing of *B. anthracis* Tangail-1 was performed by Ion Torrent sequencing technology (Ion Torrent Systems Inc., USA). For the WGS library, 1,705,145 reads with a total of 460 Mbases were generated. Bowtie-2 (10) was used for mapping to Ames Ancestor chromosome, plasmid pXO1 and pXO2 (NC_007530.2, NC_007322.2, AE017335.3), respectively. The G+C content was calculated using an in-house Python script.

The total length of the genome shotgun sequence of *B. anthracis* Tangail-1 was 5,227,292 bp with a 105-fold coverage for the chromosome (197-fold for pXO1 and 130-fold for pXO2), and the mean G+C content was 35%. For initial annotation, assembled contigs were submitted to the RAST annotation pipeline (11, 12). The *B. anthracis* Tangail-1 draft genome encodes 5,720 putative coding sequences (CDS). Annotation identified 11 copies of genes

for 16S rRNA, 5S rRNA, and 23S rRNA within the genome; 95 tRNA loci were identified. The *B. anthracis* Tangail-1 genome represents a reference genome of a *B. anthracis* strain of the A.Br.001/002-clade from Bangladesh for further country-wide genotype analysis.

Nucleotide sequence accession numbers. This whole-genome shotgun project has been deposited at DDBJ/EMBL/GenBank under the accession no. [CP015777](https://www.ncbi.nlm.nih.gov/nuccore/CP015777) (pXO1), [CP015778](https://www.ncbi.nlm.nih.gov/nuccore/CP015778) (pXO2), and [CP015779](https://www.ncbi.nlm.nih.gov/nuccore/CP015779) (chromosome). The versions described in this paper are the first versions.

ACKNOWLEDGMENTS

Thanks are due to Linda Dobrzykowski and Philipp Vette for skillful technical assistance.

This work was supported by funds from the German Ministry of Defense (Sonderforschungsprojekt 25Z1-S-431214 to M.A.).

Work in Bangladesh was supported by the Bangladesh Academy of Sciences under BAS-USDA Program in Agriculture and Life Sciences.

FUNDING INFORMATION

This work, including the efforts of Markus Heinrich Antwerpen, was funded by German Ministry of Defense (25Z1-S-431214).

The funders had no role in study design, data collection and interpretation, or the decision to submit the work for publication.

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