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Draft Genome Sequence of Mycobacterium elephantis Strain Lipa

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We report the draft genome sequence of *Mycobacterium elephantis* strain Lipa from a sputum sample of a patient with pulmonary disease. This is the first draft genome sequence of *M. elephantis*, a rapidly growing mycobacterium.

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M*vcobacterium elephantis* is a rapidly growing mycobacterium, originally isolated from a lung abscess in an elephant in 2000, that has been occasionally isolated from human clinical samples, most commonly sputum specimens (1-3). *M. elephantis* has also been reported to have been isolated from a cervical lymph node, although its relation to clinical disease is unclear (2). The notable phenotypic characteristics of *M. elephantis* include a relatively slow growth rate for a rapid growing mycobacterium, smooth colonies producing a pale yellow pigment with age, and ability to grow on 5% NaCl in Lowenstein-Jensen medium, along with a unique high-performance liquid chromatography (HPLC) mycolic acid profile (3).

Rapidly growing mycobacteria constitute a commonly isolated population of acid-fast bacillus in the clinical microbiology lab of varying clinical importance (4, 5). We sequenced the first draft genome of *M. elephantis* from a sputum sample of a patient in 2003 with pulmonary disease. The isolate was originally typed as *M. elephantis* based on partial 16S sequencing.

DNA from M. elephantis strain Lipa was extracted using the Qiagen EZ1 kit, and paired-end libraries were prepared using the Nextera XT DNA library kit followed by sequencing on an Illumina MiSeq instrument. Sequences were adapter and quality (Q20) trimmed using Cutadapt, de novo assembled using SPAdes v3.5, metagenomically screened for contaminating sequence with SURPI, and annotated via Prokka v1.1 (6-9). A total of 9,000,614 paired-end reads of average length 115 nucleotides were recovered after trimming. De novo assembly yielded 234 contigs for a total assembly size of 5,187,616 bp with an N_{50} of 42,430 bp, an average coverage of $196 \times$, and a total of 5,022 coding sequences. Contiguity was most likely disrupted by the high G+C content (68%) along with several high-copy-number integrases, transposases, and recombinases that were longer than sequence read length. Other high-copy-number contigs included those containing genes to mlaE phospholipid ABC transporter permease, for which M. elephantis strain Lipa had 19 different homologs in the genome.

The five closest BLASTN hits to the complete 16S sequence from the isolate were other *M. elephantis* 16S sequences with 99.4 to 100% identity. The Lipa strain contained three putative betaglucosidase genes. By Comprehensive Antibiotic Resistance Database analysis, the Lipa strain includes an *arr1* rifampin ADP- ribosyl transferase (85% by amino acid to *M. vanbaalenii* PYR-1) and a *blaF* beta-lactamase (10).

Nucleotide sequence accession numbers. This whole-genome shotgun project has been deposited at DDBJ/ENA/GenBank under the accession no. LBNO00000000. The assembly described in this paper is the first version, LBNO01000000.

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