





Draft Genome Sequence of the Commensal Escherichia coli Strain F-18

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Here, we report the draft genome sequence of Escherichia coli strain F-18, originally isolated from the feces of a healthy individual in 1977. The draft genome is 5,246,829 bp, with a G+C content of 50.50%, and it encodes 4,933 predicted coding sequences (CDSs), 10 rRNAs, and 84 tRNAs.

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scherichia coli F-18 is a clinical strain that was originally isolated in the United States in 1977 from the feces of a healthy individual (1). F-18 contains seven plasmids, is of serotype rough: K1:H5, produces colicin V, and makes type 1 pili. This strain has also been demonstrated to be an excellent colonizer of the streptomycin-treated mouse large intestine (2, 3) and has been used in in vivo studies (4). As E. coli F-18 was recovered from a healthy individual, this genome sequence will thus serve as a useful resource for future studies into human intestinal pathogens, as a comparison to pathogenic strains.

Genomic DNA of E. coli F-18 was extracted from a freshly grown single colony using an Illumina Nextera XT DNA sample kit, as per the manufacturer's protocol (Illumina, San Diego, CA). Sequencing was performed by Illumina MiSeq using a 2×250 paired-end protocol. Read quality analysis and trimming were conducted using Trimmomatic (5) and the quality assessed using in-house scripts combined with SAMtools (6), BedTools, and BWA-MEM (7). De novo assembly was conducted with SPAdes version 3.5 (8), resulting in a total of 101 contigs, with 84 contigs larger than 1,000 bp. The draft genome of E. coli F-18 is 5,246,829 bp, with 50.50% G+C content, and it encodes 4,933 coding sequences (CDSs), 10 rRNAs, and 84 tRNA sequences. Bioinformatic prediction of antimicrobial resistance genes using ResFinder (version 2.1) (9) revealed only the sulfonamide resistance gene sul2. VirulenceFinder (version 1.5) (10) identified seven genes with potential roles in virulence, including in serum survival and as siderophore receptors.

Accession number(s). This draft genome project has been deposited at DDBJ/EMBL/GenBank under the accession number MLZI00000000 (BioProject PRJNA348710; BioSample SAMN05914511). The version described in this paper is version MLZI01000000.

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