Draft genome sequences of Lactobacillus equicursoris CIP 110162τ and Lactobacillus sp. strain CRBIP 24.137, isolated from thoroughbred racehorse feces and human urine, respectively

Sylvie Cousin, Valentin Loux, Laurence Ma, Sophie Creno, Dominique Clermont, Chantal Bizet, Christiane Bouchier

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Draft Genome Sequences of *Lactobacillus equicursoris* CIP 110162^T and *Lactobacillus* sp. Strain CRBIP 24.137, Isolated from Thoroughbred Racehorse Feces and Human Urine, Respectively

Sylvie Cousin,[a] Valentin Loux,[b] Laurence Ma,[c] Sophie Creno,[c] Dominique Clermont,[a] Chantal Bizet,[a] Christiane Bouchier[c]

Institut Pasteur, Centre de Ressources Biologiques de l'Institut Pasteur, Département Microbiologie, Paris, France[a]; Institut Pasteur, Plate-forme Génomique, Département Génomes et Génétique, Paris, France[b]; INRA, UR1077 Mathématique, Informatique et Génome, Jouy-en-Josas, France[c]

We report the draft genome sequences of strain *Lactobacillus equicursoris* CIP 110162^T, isolated from racehorse breed feces, and *Lactobacillus* sp. strain CRBIP 24.137, isolated from human urine; the two strains are closely related. The total lengths of the 116 and 62 scaffolds are about 2.157 and 2.358 Mb, with G+C contents of 46 and 45% and 2,279 and 2,342 coding sequences (CDSs), respectively.

*L*actobacillus equicursoris strain CIP 110162^T was isolated from the feces of a healthy thoroughbred racehorse in Japan, whereas *L. equicursoris* strain 66C is a clinical isolate from a human urine sample; 66C was deposited at the collection of the Institut Pasteur under the name CRBIP 24.137. It was previously demonstrated that strain CIP 110162^T formed a subcluster in the *Lactobacillus delbrueckii* phylogenetic group and was closely related to *L. delbrueckii* but yet genetically distinct from its phylogenetic relatives (1). Sequence analysis of the 16S rRNA gene revealed that strain CRBIP 24.137 shows 99.1% similarity with the strain *L. equicursoris* CIP 110162^T. DNA–DNA relatedness between strain 66C and the closely related type strains was more than the 70% cutoff value that is recommended for species delineation (2). The average nucleotide identity between the 2 genomes is 99.8% (3). These figures confirm that the two strains belong to the same species.

Here, we report the genome sequences of *L. equicursoris* CIP 110162^T and *Lactobacillus* sp. strain CRBIP 24.137, obtained using a whole-genome strategy based on Illumina paired-end sequencing, with insert lengths of about 420 and 352 bp, respectively (Illumina HiSeq 2000), as observed on Agilent high-sensitivity DNA kit. Quality-filtered reads (71,743,098 and 68,403,694 reads, 97 and 97.7 bases mean read length, and ~3,040 and 2,790-fold coverage, respectively) were assembled using ABySS software (version 1.2.6 [4]) with different *k*-mer lengths (*k*) of 25, 30, 40, and 60. Scaffolds with maximum lengths of 122,530 and 254,168 bases were obtained with *k* values of 40 and 60, respectively.

The draft genomes for CIP 110162^T and CRBIP 24.137 consist of 2,156,576 and 2,357,741 nucleotides (nt) split into 116 and 62 scaffolds and with G+C contents of 46 and 45%, respectively. The scaffolds were annotated with the AGMIAL platform (5), an integrated bacterial genome annotation system. The prediction of coding sequences used the self-training gene detection software SHOW based on hidden Markov models (http://genome.jouy.inra.fr/ssb/SHOW/). tRNAs and rRNAs were detected using tRNAscan-SE (6) and RNAmmer (7) softwares, respectively. The numbers of predicted coding sequences (CDSs) were 1,937 and 2,104, respectively; 3 rRNA operons with 1 copy each of 23S, 5S, and 16S and 55 tRNA genes were detected for strain CIP 110162^T, while 5 rRNA operons with 2 and 3 copies of 5S and 16S, respectively, and 72 tRNA genes were detected for strain CRBIP 24.137.

Nucleotide sequence accession numbers. The strains are publicly available in two European collections under no. CIP 110162^T, DSM 19284^T, CRBIP 24.137, and DSM 23909. The draft of the whole-genome sequencing project has been deposited in EMBL under the accession no. CAMA01000001 to CAMA01000232 and CALZ01000001 to CALZ01000161, respectively. The versions described in this paper are the first versions.

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