ABSTRACT

Medicago archiducis-nicolai Sirj. is a well-known high-quality forage as its good palatability and strong tolerance to drought, cold and saline-alkali stress. Here, the complete chloroplast genome sequence of M. archiducis-nicolai was reported. The size of the complete chloroplast genome is 127,072 bp in length. The chloroplast genome has no inverted repeat (IR) regions, which is very common in the family Fabaceae. The M. archiducis-nicolai chloroplast genome encodes 106 genes: 72 protein-coding genes, 30 tRNAs, and 4 rRNAs. The phylogenetic analysis result strongly suggested that M. archiducis-nicolai is a distinct lineage in Medicago, being sister to highly supported clade composed of three species (M. hybrida, M. papillosa and M. sativa).

KEYWORDS
Medicago archiducis-nicolai; chloroplast genome; Fabaceae; phylogenetic analysis

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is 34.23%. A total of 106 functional genes were annotated, including 72 protein-coding genes (PCGs), 30 tRNA genes and 4 rRNA genes. 14 of them contain 1 intron and 1 of them contains 2 introns.

Eight complete chloroplast genomes of Fabaceae (the number from Medicago and Pisum are 7 and 1, respectively) and two outgroups (two species from Crassulaceae Phedimus) were used for constructing maximum likelihood with 1000 bootstrap repeats (model: K3Pu + F) by W-IQ-TREE (Trifinopoulos et al. 2016) after aligned by MAFFT 7 (Katoh and Standley 2013) (Figure 1). The phylogenetic tree showed that M. archiducis-nicola was sister to the clade composed of three species (M. hybrida, M. papillosa and M. sativa).

**Disclosure statement**

No potential conflict of interest was reported by the authors.

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**Data availability statement**

The data that support the findings of this study are openly available in GenBank of National Center for Biotechnology Information at [https://www.ncbi.nlm.nih.gov](https://www.ncbi.nlm.nih.gov) (Reference number: MN901634) and Sequence Read Archive at [https://www.ncbi.nlm.nih.gov/search/all/?term=SRR12951164](https://www.ncbi.nlm.nih.gov/search/all/?term=SRR12951164) (Number: SRR12951164).

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