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Title: Genome sequence of the Lotus spp. microsymbiont Mesorhizobium loti strain R7A

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Abstract: Mesorhizobium loti strain R7A was isolated in 1993 in Lammermoor, Otago, New Zealand from a Lotus corniculatus root nodule and is a reisolat of the inoculant strain ICMP3153 (NZP2238) used at the site. R7A is an aerobic, Gram-negative, non-spore-forming rod. The symbiotic genes in the strain are carried on a 502-kb integrative and conjugative element known as the symbiosis island or ICEMISym(R7A). M. loti is the microsymbiont of the model legume Lotus japonicus and strain R7A has been used extensively in studies of the plant-microbe interaction. This report reveals that the genome of M. loti strain R7A does not harbor any plasmids and contains a single scaffold of size 6,529,530 bp which encodes 6,323 protein-coding genes and 75 RNA-only encoding genes. This rhizobial genome is one of 100 sequenced as part of the DOE Joint Genome Institute 2010 Genomic Encyclopedia for Bacteria and Archaea-Root Nodule Bacteria (GEBA-RNB) project.

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