



Molecular phylogeny and a taxonomic proposal for the genus *Streptococcus*

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ABSTRACT. Alternative phylogenies for the genus *Streptococcus* have been proposed due to uncertainty about the among-species group relationships. Here, we performed a phylogenetic analysis of the genus *Streptococcus*, considering all the species groups and also the genomic data accumulated by other studies. Seventy-five species were subjected to a Bayesian phylogenetic analysis using sequences from eight genes (16S rRNA, *rpoB*, *sodA*, *tuf*, *rnpB*, *gyrB*, *dnaJ*, and *recN*). On the basis of our results, we propose a new Phylogeny for the genus, with special emphasis on the inter-species group level. This new phylogeny differs from those suggested previously. From topological and evolutionary distance criteria, we propose that *gordonii*, *pluranimalium*, and *sobrinus* should be considered as new species groups, in addition to the currently recognized groups of *mutans*, *bovis*, *pyogenic*, *suis*, *mitis*, and *salivarius*.

Key words: Bayesian analysis; Phylogeny; *Streptococcus*; Species group