A description of genes of *Corynebacterium pseudotuberculosis* useful in diagnostics and vaccine applications

V. D’Afonseca¹, P.M. Moraes¹, F.A. Dorella¹, L.G.C. Pacheco¹, R. Meyer², R.W. Portela², A. Miyoshi¹* and V. Azevedo¹*

¹Laboratório de Genética Celular e Molecular, Departamento de Biologia Geral, ICB-UFMG, Belo Horizonte, MG, Brasil
²Laboratório de Imunologia e Biologia Molecular, Departamento de Bioterapia, ICS-UFBA, Belo Horizonte, MG, Brasil
*Both authors contributed equally to this study.

Corresponding author: V. Azevedo
E-mail: vasco@icb.ufmg.br

Received January 28, 2008
Accepted February 20, 2008
Published March 18, 2008

ABSTRACT. *Corynebacterium pseudotuberculosis*, a Gram-positive intracellular pathogen, is the etiological agent of caseous lymphadenitis or CLA. This bacterium infects goats and sheep and causes great economic losses worldwide annually, mainly for goat producers. Despite its importance, CLA is still poorly characterized. However, with advances in the genomic field, many *C. pseudotuberculosis* genes have already been characterized, mainly those related to virulence such as phospholipase D. Here, we examined the use of the several available genes of *C. pseudotuberculosis* and reviewed their applications in vaccine construction, more efficient diagnostics for CLA, and control of this disease, among other applications.

Key words: Phospholipase D; RecA; Caseous lymphadenitis