

# The bioactivity of plant extracts against representative bacterial pathogens of the lower respiratory tract

Virgilio Bocanegra-García<sup>1</sup>, María del Rayo Camacho-Corona<sup>2\*</sup>, Mónica Ramírez-Cabrera<sup>2</sup>, Gildardo Rivera<sup>1</sup> and Elvira Garza-González<sup>3</sup>

<sup>1</sup> Departamento de Biología Molecular y Bioingeniería, UAM Reynosa Aztlán, Universidad Autónoma de Tamaulipas, Reynosa, Mexico

<sup>2</sup> Laboratorio de Química de Productos Naturales, División de Estudios Superiores de la Facultad de Ciencias Químicas, Universidad Autónoma de Nuevo León, Monterrey, NL, Mexico

<sup>3</sup> Departamento de Microbiología Facultad de Medicina, Universidad Autónoma de Nuevo León, Monterrey, NL, Mexico

## Abstract

Lower respiratory tract infections are a major cause of illness and death. Such infections are common in intensive care units (ICU) and their lethality persists despite advances in diagnosis, treatment and prevention. In Mexico, some plants are used in traditional medicine to treat respiratory diseases or ailments such as cough, bronchitis, tuberculosis and other infections. Medical knowledge derived from traditional societies has motivated searches for new bioactive molecules derived from plants that show potent activity against bacterial pathogens. Therefore, the aim of this study was to evaluate the effect of hexanic, chloroformic (CLO), methanolic (MET) and aqueous extracts from various plants used in Mexican traditional medicine on various microorganisms associated with respiratory disease.