

In Vitro Antimycobacterial Activity of Aqueous and Alcoholic Leaves Extracts of *Plumeria alba* against *Mycobacterium kansasii*

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SUMMARY. Many diseases, especially in people with impaired immune systems, are caused by *Mycobacterium* spp. Finding a novel and creative option for the treatment of drug-resistant mycobacterial strains is necessary due to the enormous problem of antimycobacterial drug resistance spreading in the public health sector. In this work, antimycobacterial activity against *Mycobacterium kansasii* as a test strain for alcoholic leaves extracts (ELEPA) and aqueous leaves extract of *Plumeria alba* (ALEPA). *Plumeria alba* Linn. (Apocynaceae) is widely used in traditional medicine for several ailments and is also a prominent ingredient in perfumes. Glycosides, alkaloids, terpenoids, flavonoids, tannins, steroids, phenols, carbohydrates, proteins, and amino acids are just a few of the compounds that can be found in this plant. These molecules have significant and varied pharmacological effects that can treat various illnesses and disorders. It is unknown that *P. alba* leaves have antimycobacterial qualities and we are aware of no other research on the antimycobacterial abilities of *P. alba* leaf extracts before this one. When tested for antimycobacterial activity against *M. kansasii*, leaf extracts *P. alba* in both ELEPA and ALEPA were shown to be significant (p 0.001) activity in comparison to the reference drug.

RESUMEN. Muchas enfermedades, especialmente en personas con sistemas inmunológicos deteriorados, son causadas por *Mycobacterium* spp. Es necesario encontrar una opción novedosa y creativa para el tratamiento de cepas de micobacterias resistentes a los medicamentos debido al enorme problema de la propagación de la resistencia a los medicamentos antimicobacterianos en el sector de la salud pública. En este trabajo, la actividad antimicobacteriana contra *Mycobacterium kansasii* como cepa de prueba para extractos alcohólicos de hojas (ELEPA) y extracto acuoso de hojas de *Plumeria alba* (ALEPA). *Plumeria alba* Linn. (Apocynaceae) se usa ampliamente en la medicina tradicional para varias dolencias y también es un ingrediente destacado en los perfumes. Glucósidos, alcaloides, terpenoides, flavonoides, taninos, esteroides, fenoles, carbohidratos, proteínas y aminoácidos son solo algunos de los compuestos que se pueden encontrar en esta planta. Estas moléculas tienen efectos farmacológicos significativos y variados que pueden tratar diversas enfermedades y trastornos. Se desconoce que las hojas de *P. alba* tienen cualidades antimicobacterianas y no conocemos ninguna otra investigación sobre las capacidades antimicobacterianas de los extractos de hojas de *P. alba* antes de esta. Cuando se analizó la actividad antimicobacteriana contra *M. kansasii*, los extractos de hojas de *P. alba* en ELEPA y ALEPA mostraron una actividad significativa (p 0,001) en comparación con el fármaco de referencia.

KEY WORDS: antimycobacterial activity, infections, phytochemicals, plant extract, *Plumeria alba*.

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