



Faculty of Science

**Antimicrobial studies of (*Mangifera indica*
L., *Anacardiaceae*) plant extracts against
selected pathogenic microorganisms**

Thesis

Submitted to Faculty of Science Ain Shams University in
Partial Fulfillment of Master Degree in Microbiology

Presented by

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دراسات المضادات الميكروبية لمستخلصات نبات المانجو (مانجيفيرا إنديكا، أناكارديسيا) ضد الميكروبات الممرضة المختارة.

رسالة مقدمة إلى

قسم الميكروبيولوجي- كلية العلوم- جامعة عين شمس
كجزء متمم للحصول على درجة الماجستير في الميكروبيولوجي
من

الشيماء محفوظ محمد

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المانجو (مانجيفيرا انديكا، اناكارديسيا) ضد
الميكروبات الممرضة المختارة.**

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﴿ قالوا سبحانك لا علم لنا الا ما علمتنا

انك انت العظيم الحكيم ﴾

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Declaration

This Thesis has not previously submitted for this and any other university. The references were being checked whenever possible, show the extent to which I have availed myself of the work of other authors.

El- Shimaa Mahfouz Mohamed

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Abstract

The use of natural antimicrobial products extracted from plants is now a day widely used, since plant matrices possess antimicrobial natural products to protect themselves from microbial infection and deterioration. Plant polyphenolics are currently growing interest due to their likely human health benefit properties.

The aim of the present study is to investigate the antimicrobial activity of different parts (leaves, kernels, pulp juices and unripe pulp) of four varieties of *Mangifera indica* by different solvents (Ethanol 70%, acetone, boiled water and water 37°C. The different extracts were tested for their inhibitory effects using the agar diffusion method at different concentrations 10% and 20% (w/v) on nine bacterial species, five of them are gram-negative (*S. typhimurium*, *S. cerro*, *Sh. dysenteriae*, *E.coli* and *P. mirabilis*) and the remaining four are gram-positive (*B. cereus*, *B. lichiniformis*, *Staph. aureus* and *L. monocytogenes*).

The study demonstrated that gram-positive bacteria are more susceptible than gram-negative bacteria. None of the tested pathogens are inhibited by mango juices, and they showed moderate activity with leaf and unripe pulp extracts. But the results of mango kernel extracts (MKEs) showed