THE EFFECT OF EXTRACTS OF SOME MEDICINAL AND AROMATIC PLANTS ON SOME PATHOGENIC MICROORGANISMS

By

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B. Sc. Agric. Sc. (Agricultural Microbiology), Ain Shams University, 2004

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تأثير مستخلصات بعض النباتات الطبية و العطرية على بعض الكائنات الحية الدقيقة الممرضة

رسالة مقدمة من

مروة مختار إبراهيم سيد أحمد

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للحصول على

درجة الماجستير في العلوم الزراعية

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ABSTRACT

Marwa Mokhtar Ibrahim Said Ahmed: The Effect of Extracts of Some Medicinal And Aromatic Plants on Some Pathogenic Microorganisms. Unpublished M. Sc. Thesis, Department of Agricultural Microbiology, Faculty of Agriculture, Ain Shams University, 2012.

This study aimed to evaluate the antimicrobial activity of 11 different essential oils such as *Allium sativum, Cinnamomum cassia, Dianthus caryophyllus, Eucalyptus globulus, Majorana hortensis, Marticaria chamomilla, Mentha piperita, Nigella sativa, Ocimum basilicum, Pimpinella anisum* and *Thymus vulgaris* against 5 Gram-negative bacteria, 6 Gram-positive bacteria and 6 pathogenic fungi. While all tested plant extracts produced some antibacterial and antifungal activities, *Eucalyptus globules, Marticaria chamomilla* and *Thymus vulgaris* were the most active plants extracts that showed potent antifungal activity. Minimum inhibitory concentration (MIC) of the most efficient extracts against all tested microorganisms and with special reference of *Phytophthora infestans* & *Fusarium oxysporum* were determined. The MIC of the plants extract ranged between 144.7 to 166.2 and 266 µg/ml. According to MIC effect, pot experiment was conducted to test the selected extracts in controlling late blight of tomato plant. *Thymus vulgaris* volatile oil extract and *Matricaria chamomilla* gave the best results in inhibiting of *Phytophthora infestans* in concentration of 600 and 400 µl/ml. *Thymus vulgaris, Marticaria chamomilla* and *Thymus vulgaris* were the most active plants extracts against *Fusarium oxysporum* in concentration of 600 µl/ml.

KeyWords: Medicinal plant extracts, MIC, antifungal activity, late blight disease,antibacterial activity.

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