

Antimicrobial Isothiocyanates from the Seeds of *Moringa oleifera* Lam.

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4-(-L-Rhamnosyloxy)benzyl isothiocyanate (**1**) and 4-(4'-O-acetyl- -L-rhamnosyloxy)-benzyl isothiocyanate (**2**) isolated from *Moringa oleifera* seeds were screened for their antibacterial activities against *Staphylococcus aureus*, *Staphylococcus epidermidis*, *Bacillus subtilis*, *Escherichia coli*, *Enterobacter aerogenes*, *Klebsiella pneumoniae*, and *Pseudomonas aeruginosa*, and for their antifungal activities against *Candida albicans*, *Trichophyton rubrum*, and *Epidermophyton floccosum* using the disk diffusion method. Isothiocyanates **1** and **2** were found active at the lowest inhibitory concentration of 1 mg/ml against all Gram-positive bacteria tested (*S. aureus*, *S. epidermidis*, *B. subtilis*) and against the dermatophytic fungi *E. floccosum* and *T. rubrum*. Statistically significant differences were found between the mean inhibition zones (IZ) of **1** and **2** and the standard drugs, ofloxacin and clotrimazole. The minimum inhibitory concentration (MIC) values confirmed the good antimicrobial activity of **1** and **2** against *S. aureus*, good to moderate activity against *S. epidermidis*, moderate activity against *B. subtilis*, and weak activity against *E. floccosum* and *T. rubrum*. The *in vitro* bactericidal effect of **1** and **2** against the Gram-positive bacterial strains tested is suggested by MBC:MIC ratios of 2:1.

Key words: *Moringa oleifera*, Isothiocyanates, Antimicrobial