

Antimycobacterial Activity of Natural and Semi-Synthetic Lignans

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The antimycobacterial activity of (-)-cubebin (**1**), hinokinin (**2**), and some of their semi-synthetic derivatives, namely (-)-*O*-acetyl-cubebin (**3**), (-)-*O*-methyl-cubebin (**4**), (-)-*O*-(*N,N*-dimethylamine-ethyl)-cubebin (**5**) and (-)-6,6'-dinitrohinokinin (**6**), was evaluated against *Mycobacterium tuberculosis* (ATCC 27294), *M. kansasii* (ATCC 12478), and *M. avium* (ATCC 15769). The MIC values ranged from 31.25 to 2000 µg/mL. Among the evaluated compounds, **2** displayed a MIC value of 62.5 µg/mL against *M. tuberculosis*, while **3** and **4** displayed MIC values of 62.5 and 31.25 µg/mL, respectively, against *M. avium*. All compounds were inactive against *M. kansasii*. These are promising results concerning the search for biologically active natural products, highlighting that new approaches to the prevention, treatment, and cure of tuberculosis are extremely important.

Key words: Cubebin, Lignans, Antimycobacterial Activity