Antibacterial *Curcuma xanthorrhiza* Extract and Fractions

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Abstract	An acetone extract of Curcuma xanthorrhiza rhizomes and the nhexane and chloroform fractions obtained from it were tested on eight pathogenic bacteria. The results showed that the acetone extract and the nhexane fraction exhibited significant activities against Bacillus subtilis, Pseudomonas aeruginosa, and Staphylococcus aureus, and weak activities against Shigella dysenteriae and Vibrio cholerae. They were inactive against Escherichia coli, Enterobacter aerogenes and Salmonella thypi, while the chloroform fraction was devoid of activities. NMR analysis disclosed the presence of a-curcumene, xanthorrhizol and an unknown monoterpene in the nhexane fraction. In the chloroform fraction, curcumin was found to be the main compound, together with xanthorrhizol as a minor compound. These results suggest that the antibacterial potency of acetone extract of C. xanthorrhiza is contained in the n-hexane fraction, in which the active constituents are terpenoid compounds. This is the first report of the use of NMR analysis for compound identification contained in an extract or fractions of C. xanthorrhiza.
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