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## **Curcumin and Tetrahydrocurcumin Analogs as Drugs Candidate for Infectious Diseases in Indonesia**

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## Abstract

As we know, Indonesia is more vulnerable to infectious disease. We focus our research on the development of curcumin and tetrahydrocurcumin analog as drug candidate of infectious disease in Indonesia. The analogs are PGV-0, PGV-1, THPGV-0 and THPGV-1. THPGV-0 has antibacterial activity against S. aureus and B. subtilis at concentration 5 mg/mL and no activity againts E. coli until concentration 10 mg/mL. THPGV-1 has antibacterial activity againts S. aureus, E. coli, and B. Subtilis at concentration 0.5 mg/mL, 1 mg/mL and 0.5 mg/mL. While PGV-1 has activity at concentration 0.5 mg/mL, 5 mg/mL and 1 mg/mL against S. aureus, E. coli and B. Subtilis but with smaller zone of inhibition. THPGV-1 is better antibacterial agent than THPGV-0. THPGV-1 is a better antibacterial agent compared to PGV-1. Antifungal activity of THPGV-0 is better than PGV-0 and THPGV-1 is better than PGV-1 is more potent compared to THPGV-0 as antifungal agents. THPGV-1 shows antifungal activity at concentration of 1 mg/mL and THPGV-0 shows activity at concentration of 5 mg/mL. Results showed it has potency to be develop more as drug candidate for urgent infectious diseases in Indonesia.

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