

Document details

[Back to results](#) | 1 of 1

Export Download Print E-mail Save to PDF Add to List More... >

International Medical Journal Malaysia
Volume 16, Issue 2, 1 December 2017, Pages 27-32

Open Access

Synergistic effects of *Persicaria odorata* (Daun Kesom) leaf extracts with standard antibiotics on pathogenic bacteria (Article)Ridzuan, P.M.^a, Hamzah, H.A.^a, Shah, A.^b, Hassan, N.M.^c, Roesnita, B.^d^aDepartment of Basic Medical Sciences, Kulliyah of Medicine, International Islamic University Malaysia (IIUM), Kuantan Pahang, Malaysia^bDepartment of Internal Medicine, Kulliyah of Medicine, International Islamic University Malaysia (IIUM), Kuantan Pahang, Malaysia^cDepartment of Pharmaceutical Chemistry, Kulliyah of Pharmacy, International Islamic University Malaysia (IIUM), Kuantan Pahang, Malaysia

View additional affiliations ▾

Abstract

[View references \(16\)](#)

Antibacterial activity of different types of *P. odorata* leaf extracts was evaluated in combination with standard antibiotics. *Persicaria odorata* leaves were extracted with n-hexane (n-hex), dichloromethane (DCM) and methanol (MeOH). Each extract was applied on vancomycin (30µg), erythromycin (15µg) and gentamicin (10µg) discs, respectively. Disk diffusion method was used to evaluate the synergistic activity of each combination on *Staphylococcus aureus*, *Staphylococcus epidermidis*, *Streptococcus pyogenes*, *Streptococcus pneumoniae*, *Pseudomonas aeruginosa*, *Salmonella typhi*, and *Escherichia coli*. Minimum inhibitory concentration (MIC) and gas chromatography mass spectrometry (GCMS) analysis was performed on the active extract. Synergistic effects seen were mainly from the n-hex+antibiotics combinations, mainly on the Gram-positive bacteria (7 additive, 5 antagonistic), with MIC range from 50 µg/ml to 100 µg/ml, as well as Gram-negative bacteria (2 additive, 2 indifferent, 5 antagonistic). In particular, synergism showed by the combination of n-hex+van were all additive against the susceptible bacteria. DCM extract combination showed synergistic effects on three Gram-positive species (*S. aureus*, *S. epidermidis*, *S. pyogenes*). Meanwhile, MeOH+antibiotics combination showed significant additive synergistic effects ($p < 0.05$) on *S. aureus* and *S. epidermidis*. The major compounds of leaves extract were decanal and 8-citral. n-Hex extract superiorly inhibited Gram-positive bacteria growth as compared to DCM and MeOH extracts. The additive synergistic property of the n-hex *P. odorata* extract could be further studied for possible use as an antibacterial agent.

Reaxys Database Information

[View Compounds](#)

Author keywords

Antibiotics Persicaria odorata leaf extracts Synergy antimicrobial activity

ISSN: 18234631
Source Type: Journal
Original language: EnglishDocument Type: Article
Publisher: International Islamic University Malaysia

Metrics

0 Citations in Scopus

0 Field-Weighted Citation Impact

PlumX Metrics
Usage, Captures, Mentions,
Social Media and Citations
beyond Scopus

Cited by 0 documents

Inform me when this document is cited in Scopus:

[Set citation alert >](#)[Set citation feed >](#)

Related documents

Antifungal activity of persicaria odorata extract against anthracnose caused by colletotrichum capsici and colletotrichum gloeosporioides

Yannirat, P., Vairodaya, S.
(2015) *Malaysian Applied Biology*Effect of Vietnamese coriander (*Persicaria odorata*), turmeric (*Curcuma longa*) and asam gelugor (*Garcinia atrovirens*) leaf on the microbiological quality of gulai tempoyak pasteAbdul Aris, M.H., Lee, H.Y., Hussain, N.
(2015) *International Food Research Journal*Split-face placebo controlled evaluation of the in vivo anti-ageing efficacy of lineminus™ cream (*Polygonum minus* extract) in healthy asian skin type female subjectsHaris, H.H.B., Ming, Y.K., Perin, F.
(2014) *Asian Journal of Pharmaceutical and Clinical Research*[View all related documents based on](#)