

REFERENCES

1. Jaggar SI. Overview of pain pathway. In: Holdcroft A, Jaggar SI, eds. Core topics in pain. Cambridge: Cambridge University Press; 2005. p. 3-5.
2. Fink WA, Jr. The pathophysiology of acute pain. *Emerg Med Clin North Am* 2005; 23(2):277-284.
3. Devine EC. Disorders of somatosensory function and pain In: Porth C, ed. Essentials of pathophysiology: concepts of altered health states. 2nd ed. Philadelphia: Lippincott Williams & Wilkins; 2007. p. 770-774.
4. Bradley LA. Mechanisms of pain and pain modulation. In: Koopman WJ, Moreland LW, eds. Arthritis and allied conditions: a textbook of rheumatology. 15th ed. Philadelphia: Lippincott Williams & Wilkins; 2005. p. 962-976.
5. Sabiston DC, Townsend CM. Sabiston textbook of surgery: the biological basis of modern surgical practice. 18th ed. Philadelphia: Saunders/Elsevier; 2008.
6. Hawthorn J, Redmond K. Pain: causes and management. Oxford; Malden, MA: Blackwell Science; 1998.
7. Vanderah TW. Pathophysiology of pain. *The medical clinics of North America* 2007; 91(1):1-12.
8. Fauci AS. Harrison's principles of internal medicine. 17th ed. New York: McGraw-Hill; 2008.

9. Wiart C. Ethnopharmacology of medicinal plants: Asia and the Pacific. New Jersey: Humana Press Inc.; 2006.
10. Kumar V, Abbas A, Fausta N, Aster J. Robbins and Cotran pathologic basis of disease, professional edition. 8th ed. Philadelphia: Elsevier Inc.; 2009.
11. Webster NR, Galley HF. Inflammation and immunity. Br J Anaesth 2003; 3:53-58.
12. Moalem G, Tracey DJ. Immune and inflammatory mechanisms in neuropathic pain. Brain Res Rev 2006; 51(2):240-264.
13. Goldman L, Ausiello DA. Cecil medicine. 23rd ed. Philadelphia: Saunders/Elsevier; 2008.
14. Golan DE, Tashjian AJ, Armstrong EJ, Armstrong AW. Principles of inflammation and immune pharmacology. In: Golan D, ed. Principles of pharmacology. 2nd ed. Philadelphia: Lippincott Williams & Wilkins; 2008. p. 733-756.
15. Rainsford KD. Anti-inflammatory drugs in the 21st century. Subcell Biochem 2007; 42:3-27.
16. Charlier C, Michaux C. Dual inhibition of cyclooxygenase-2 (COX-2) and 5-lipoxygenase (5-LOX) as a new strategy to provide safer non-steroidal anti-inflammatory drugs. Euro J Med Chem 2003; 38:645-659.
17. Paul WE. Fundamental immunology. 8th ed. London: Lippincott Williams & Wilkins; 2003.
18. Botting RM. Inhibitors of cyclooxygenases: mechanisms, selectivity and uses. J Physiol Pharmacol 2006; 57:113-124.

19. Steinmeyer J. Pharmacological basis for the therapy of pain and inflammation with nonsteroidal anti-inflammatory drugs. *Arthritis Res* 2000; 2(5):379-385.
20. Süleyman H, Demircan B, Karagöz Y. Anti-inflammatory and side effects of cyclooxygenase inhibitors. *Pharmacol Rep* 2007; 59(3):247-258.
21. Patrono C, Rocca B. Nonsteroidal antiinflammatory drugs: past, present and future. *Pharmacol Res* 2009; 59(5):285-289.
22. Vane J, Botting R. Inflammation and the mechanism of action of anti-inflammatory drugs. *FASEB J* 1987; 1(2):89-96.
23. Brenner GM, Stevens CW. *Pharmacology*. 3rd ed. Philadelphia: Saunders/Elsevier; 2009.
24. Pieroni A, Vandebroek I. Traveling cultures and plants; the ethnobiology and ethnopharmacy of human migrations. Berghahn Books; 2009.
25. Ong CK, Bodeker G. WHO global atlas of traditional, complementary, and alternative medicine. Kobe, Japan: World Health Organization, Centre for Health Development; 2005.
26. Larsen K, Larsen SS. *Gingers of Thailand*. Queen Sirikit Botanical Garden; 2006.
27. Kent DK, Janette M, Andrew JK. *Ornamental ginger, red and pink: ornamentals and flowers*. 2007.
28. Whistler WA. *The tropical ornamental plants: tropical ornamentals a guide*. Oregon: Timber Press, Inc.; 2000.

29. Plants for landscape architecture [online]. Available: [2011, March 11].
<http://agkc.lib.ku.ac.th/plantwebsite/webpage/Shrubs/%E0%B8%9A%E0%B8%A1.html>.
30. Tushar, Basak S, Sarma GC, Rangan L. Ethnomedical uses of Zingiberaceous plants of northeast India. *J Ethnopharmacol* 2010; 132(1):286-296.
31. Kikuzaki H, Tesaki S, Yonemori S, Nakatani N. Phenylbutanoid dimers from the leaves of *Alpinia flabellata*. *Phytochemistry* 2001; 56(1):109-114.
32. Villaflor OB, Macabeo APG, Gehle D, Krohn K, Franzblau SG, Aguinaldo AM. Phytoconstituents from *Alpinia purpurata* and their *in vitro* inhibitory activity against *Mycobacterium tuberculosis*. *Phcog Res* 2010; 1(5):261-269.
33. Sirat HM, Liamen MR. Chemical constituents of *Alpinia purpurata*. *Pertanika J Sci & Technol* 1995; 3(1):67-71.
34. Sungchawek N, Tuchinda P, Kuhakarn C, Pohmakotr M, Jaipetch T, Jariyawa S, et al., eds. Chemical constituents from rhizomes of *Alpinia purpurata*. 36th Congress on Science and Technology of Thailand; 2010; Thailand.
35. Zoghbi MGB, Andrade EHA, Maia JGS. Volatile constituents from leaves and flowers of *Alpinia speciosa* K. Schum. and *A. purpurata* (Viell.) Schum. *Flavour Fragr J* 1999; 14(6):411-414.
36. Victório CP, Kuster RM, Moura RSD, Lage CLS. Vasodilator activity of extracts of field *Alpinia purpurata* (Vieill) K: Schum and *A. zerumbet* (Pers.) Burtt et Smith cultured *in vitro*. *Brazilian J Pharm Sci* 2009; 45(3):507-514.
37. Nhareet SM, Nur SM. Anti-inflammatory property of ethanol and water extracts of *Zingiber zerumbet*. *Indian J Pharmacol* 2003; 35(3):181-182.

38. Penna SC, Medeiros MV, Aimbire FSC, Faria-Neto HCC, Sertie JAA, Lopes-Martins RA. Anti-inflammatory effect of the hydralcoholic extract of *Zingiber officinale* rhizomes on rat paw and skin edema. *Phytomedicine* 2003; 10(5):381-385.
39. Black CD, Herring MP, Hurley DJ, O'Connor PJ. Ginger (*Zingiber officinale*) reduces muscle pain caused by eccentric exercise. *J Pain* 2010; 11(9):894-903.
40. Grzanna R, Lindmark L, Frondoza CG. Ginger-an herbal medicinal product with broad anti-inflammatory actions. *J Med Food* 2005; 8(2):125-132.
41. Choi JK, Kim KM, Kim DK, Yeom MH, Koh JY, Jung SJ, et al. Topical anti-inflammatory and antipruritic effects of *Alpinia katsumadai* extracts. *J Dermatol Sci* 2009; 53(1):81-84.
42. Surh YJ. Anti-tumor promoting potential of selected spice ingredients with antioxidative and anti-inflammatory activities: a short review. *Food Chem Toxicol* 2002; 40(8):1091-1097.
43. Pinto NV, Assreuy AM, Coelho-de-Souza AN, Ceccatto VM, Magalhaes PJ, Lahllou S, et al. Endothelium-dependent vasorelaxant effects of the essential oil from aerial parts of *Alpinia zerumbet* and its main constituent 1,8-cineole in rats. *Phytomedicine* 2009; 16(12):1151-1155.
44. de Araujo PF, Coelho-de-Souza AN, Morais SM, Ferreira SC, Leal-Cardoso JH. Antinociceptive effects of the essential oil of *Alpinia zerumbet* on mice. *Phytomedicine* 2005; 12(6-7):482-486.
45. Yasukawa K, Sun Y, Kitanaka S, Tomizawa N, Miura M, Motohashi S. Inhibitory effect of the rhizomes of *Alpinia officinarum* on TPA-induced

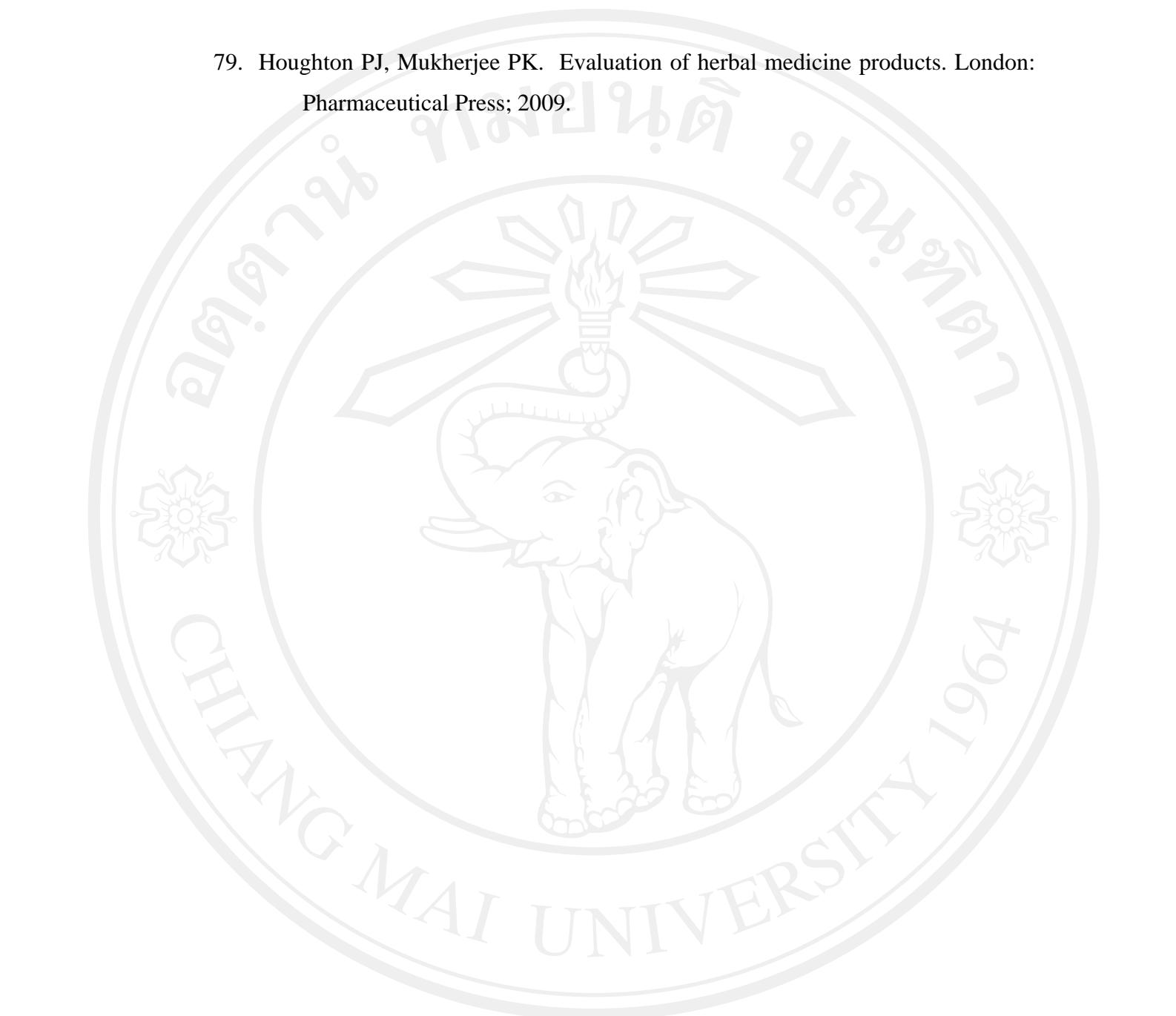
- inflammation and tumor promotion in two-stage carcinogenesis in mouse skin. *J Nat Med* 2008; 62(3):374-378.
46. Yadav PN, Liu Z, Rafi MM. A diarylheptanoid from lesser galangal (*Alpinia officinarum*) inhibits proinflammatory mediators via inhibition of mitogen-activated protein kinase, p44/42, and transcription factor nuclear factor-kappa B. *J Pharmacol Exp Ther* 2003; 305(3):925-931.
 47. Collier HO, Dinneen LC, Johnson CA, Schneider C. The abdominal constriction response and its suppression by analgesic drugs in the mouse. *Br J Pharmacol Chemother* 1968; 32(2):295-310.
 48. Nakamura H, Shimoda A, Ishii K, Kadokawa T. Central and peripheral analgesic action of non-acidic non-steroidal anti-inflammatory drugs in mice and rats. *Arch Int Pharmacodyn Ther* 1986; 282(1):16-25.
 49. D'Amour FE, Smith DL. A method for determining loss of pain sensation. *J Pharmacol Exp Ther* 1941; 72(1):74-79.
 50. Gray WD, Osterberg AC, Scuto TJ. Measurment of the analgesic efficacy and potency of pentazocine by the D'Amour and Smith method. *J Pharmacol Exp Ther* 1970; 172(1):154-162.
 51. Brattsand R, Thalen A, Roempke K, Kallstrom L, Gruvstad E. Influence of 16 alpha, 17 alpha-acetal substitution and steroid nucleus fluorination on the topical to systemic activity ratio of glucocorticoids. *J Steroid Biochem* 1982; 16(6):779-786.
 52. Winter CA, Risley EA, Nuss GW. Carrageein-induced edema in hind paw of the rat as an assay for antiinflammatory drugs. *Proc Soc Exp Biol Med* 1962; 11:544-547.

53. Di Martino MJ, Campbell GK, Jr., Wolff CE, Hanna N. The pharmacology of arachidonic acid-induced rat paw edema. *Agents Actions* 1987; 21(3-4):303-305.
54. Swingle KF, Shideman FE. Phase of the inflammatory response to subcutaneous implantation of a cotton pellet and their modification by certain anti-inflammatory agent. *J Pharm Exp Ther* 1972; 183(1):226-234.
55. Bessey OA, Lowry OH, Brock MJ. Method for the determination of alkaline phosphatase with five cubic millimeters of serum. *J Biol Chem* 1946; 164:321-329.
56. Miñano FJ, Serrano J, Pascual J, Sancibrián M. Effect of GABA on gastric acid secretion and ulcer formation in rat. *Life Sci* 1987; 41(13):1651-1658.
57. Test No. 420: Acute oral toxicity - Fixed dose procedure. OECD guidelines for the testing of chemicals 2001; 1:1-14.
58. Traversa G, Walker AM, Ippolito FM, Caffari B, Capurso L, Dezi A, *et al.* Gastroduodenal toxicity of different nonsteroidal antiinflammatory drugs. *Epidemiology* 1995; 6(1):49-54.
59. Fields HL. Analgesic drugs. In: Day W, ed. Pain. 1st ed. New York: McGraw-Hill Book Company; 1987. p. 272.
60. Raj PP. Pain mechanisms. In: Raj PP, ed. Pain medicine: a comprehensive review. 1st ed. Missouri: Mosby-Year Book; 1996. p. 12-23.
61. Boyce-Rustay JM, Honore P, Jarvis MF. Animal models of acute and chronic inflammatory and nociceptive pain. In: Szallasi A, ed. Analgesia: methods and protocol. New York: Humana Press; 2010. p. 41-55.

62. Bölcsei K, Pethö G, Szolcsányi J. Noxious heat threshold measured with slowly increasing temperatures: novel rat thermal hyperalgesia models. In: Szallasi A, ed. *Analgesia: methods and protocol*. New York: Humana Press; 2010. p. 57-66.
63. Kohn DF. *Anesthesia and analgesia in laboratory animals*. San Diego: Academic Press; 1997.
64. Hoy DB, Coimbra R, Acosta J. Management of acute trauma. In: Townsend CM, ed. *Sabiston textbook of surgery: the biological basis of modern surgical practice*. 18th ed. Philadelphia: Saunders/Elsevier; 2008. p. 456-460.
65. Rang HP. *Pharmacology*. 5th ed. Philadelphia: Elsevier Inc.; 2006.
66. Singh A, Malhotra S, Subban R. Anti-inflammatory and analgesic agents from Indian medicinal plants. *I J I B* 2008; 3(1):57-73.
67. Winyard PG, Willoughby DA. *Inflammation protocols*. Totowa, N.J.: Humana Press; 2003.
68. Carlson R, O'Neill-Davis L, Chang J, Lewis A. Modulation of mouse ear edema by cyclooxygenase and lipoxygenase inhibitors and other pharmacologic agents. *Agents Actions* 1985; 17(2):197-204.
69. Cameron GS, Baldwin JK, Klann RC, Patrick KE, Fischer SM. Tumor-promoting activity of ethyl phenylpropiolate. *Cancer Res* 1991; 51(20):5642-5648.
70. Sedgwick AD, Willoughby DA. Animal models for testing drugs on inflammatory and hypersensitivity reaction. In: Dale MM, Foreman JC, eds. *Textbook of immunology*, 2nd ed. Oxford: Blackwell Scientific; 1989. p. 253-261.

71. Di Rosa M, Giroud JP, Willoughby DA. Studies of the mediators of the acute inflammatory response in rats in different sites by carrageenan and turpentine. *J Phathol* 1971; 104(1):15-29.
72. Cottney J, Lewis AJ, Nelson DJ. Arachidonic acid-induced paw oedema in the rat. *Br J Pharmacol. [Proceeding]* 1976; 58(2):311P.
73. Spector WG. The granulomatous inflammatory exudates. *Int Rev Exp Pathol* 1969; 8:1-55.
74. Kumarappan CT, Chandra R, Mandel SC. Anti-inflammatory activity of *Ichnocarpus frutescens*. *Pharmacologyonline* 2006; 3:201-216.
75. Schimmer BP, Parker KL. Adrenocorticotrophic hormone; adrenocortical steroids and their synthetic analogs; inhibitors of the synthesis and actions of adrenocortical hormones. In: Brunton L, Lazo J, Parker K, eds. *Goodman and Gilman's the pharmacological basis of therapeutics*. 11th ed. New York: Mc Graw-Hill; 2006. p. 1593–1610.
76. Salmon JA, Higgs GA. Prostaglandins and leukotrienes as inflammatory mediators. *Br Med Bull.* 1987;43(2):285-296.
77. Nishikaze O, Takita H, Takase T. Activity of newly discovered protease in carrageenin-induced inflammation in rats. *IRCS medical science, biochemistry, connective tissue; skin and bone; survey and transplantation* 1980; 8:725.
78. Naik SR, Sheth UK. Studies on two new derivatives of N-aralkyl-o-ethoxybenzamides. Part II. Biochemical studies on their anti-inflammatory activity. *Indian J Exp Biol* 1978; 16(11):1175-1179.

79. Houghton PJ, Mukherjee PK. Evaluation of herbal medicine products. London: Pharmaceutical Press; 2009.



ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่
Copyright © by Chiang Mai University
All rights reserved