

BIBLIOGRAPHY

- จุไรรัตน์ รั้ววาทิน. 2538. การวิเคราะห์ข้อมูลการศึกษาความคงสภาพของยาแบบเร่งและแบบระยะยาว. กรุงเทพฯ: สำนักพิมพ์นิคมวิทยา.
- จุไรรัตน์ รั้ววาทิน. 2539. แนวทางการทดสอบความคงสภาพของยาต่อแสง. กรุงเทพฯ: สำนักพิมพ์นิคมวิทยา.
- เต็ม สมิตินันท์. 2544. ชื่อพรรณไม้แห่งประเทศไทย. กรุงเทพฯ: สวนพฤกษศาสตร์ป่าไม้ สำนักงานวิชาการป่าไม้ กรมป่าไม้.
- มาโนชน วามานนท์ และ เพ็ญนภา ทรัพย์เจริญ. 2537. ยาสมุนไพรสำหรับงานสาธารณสุขมูลฐาน. กรุงเทพฯ: โรงพิมพ์องค์การสงเคราะห์ทหารผ่านศึก.
- วันดี กฤษณพันธ์. 2546. โครงการพัฒนามาตรฐานสารสกัดจากใบชุมเห็ดเทศ. กรุงเทพฯ: สำนักงานคณะกรรมการวิจัยแห่งชาติ.
- Acevedo, D.M., Russell, C., Patel, S. and Patel, R. 2004. Aloe-emodin modulates PKC isozymes, inhibits proliferation, and induces apoptosis in U-373MG glioma cells. *International Immunopharmacology*, 4: 1775-1784.
- Adedayo, O., Anderson, W.A., Moo, Y.M., Snieckus, V., Patil, P.A. and Kolawole, D.O. 2001. Phytochemistry and antibacterial activity of *Senna alata* flower. *Pharmaceutical Biology*, 39: 408-412.
- Adedayo, O., Anderson, W.A., Moo, Y.M., Snieckus, V., Patil, P.A. and Kolawole, D.O. 2002. Kinetics of antibacterial activity and physicochemical damage caused by the extracts of *Senna alata* flowers. *Pharmaceutical Biology*, 40: 461-465.

- Agarwal, S.K., Singh, S.S., Verma, S. and Kumar, S. 2000. Antifungal activity of anthraquinone derivatives from *Rheum emodi*. *Journal of Ethnopharmacology*, 72: 43-46.
- Alam, A.L., Mamedov, V.A., Gubaidullin, A.T., Kalita, D. and Tsuboi, S. 2003. Isolation and identification of 2,3,7-tri-*O*-methylelagic acid from *Cassia alata* leaves. *Nature medicine*, 57: 73.
- Alcala, L., Garcia, G.F., Cercenado, E., Pelaez, T., Ramos, G. and Bouza, E. 1998. Comparison of broth microdilution method using *Haemophilus* test medium and agar dilution method for susceptibility testing of *Eikenella corrodens*. *Journal of clinical microbiology*, 36: 2386-2388.
- Ali-Emmanuel, N., Moudachirou, M., Akakpo, J.A. and Quetin-Leclercq, J. 2003. Treatment of bovine dermatophilosis with *Senna alata*, *Lantana camara* and *Mitracarpus scaber* leaf extracts. *Journal of Ethnopharmacology*, 86: 167-171.
- Alves, D.S., Perez-Fons, L., Estepa, A. and Micol, V. 2004. Membrane-related effects underlying the biological activity of the anthraquinones emodin and barbaloin. *Biochemical Pharmacology*, 68: 549-561.
- Barros, M.E.D.S., Santos, D.D.A. and Hamdan, J.N.S. 2006. *In vitro* methods for antifungal susceptibility testing of *Trichophyton* spp. *Mycological research*, 110: 1355-1360.
- Breindl, A., Beck, B. and Clark, T. 1997. Prediction of the *n*-Octanol/Water Partition Coefficient, log *P*, Using a Combination of Semiempirical MO-Calculations and a Neural Network. *Journal of molecular modeling*, 3: 142-155.
- Brinson, R.G., Hubbard, S.C., Zuidema, D.R. and Jones, P.B. 2005. Two new anthraquinone photoreactions. *Journal of Photochemistry and Photobiology A: Chemistry*, 175: 118-128.

- British Pharmacopoeia commission. 2001. British Pharmacopoeia, vol. 1, London: The stationery office.
- Chen, H.C., Hsieh, W.T., Chang, W.C. and Chung, J.G. 2004. Aloe-emodin induced *in vitro* G2/M arrest of cell cycle in human promyelocytic leukemia HL-60 cells. *Food and Chemical Toxicology*, 42: 1251-1257.
- Choi, G.J., Lee, S.W., Jang, K.S., Kim, J.S., Cho, K.Y. and Kim, J.C. 2004. Effects of chrysophanol, parietin, and nepodin of *Rumex crispus* on barley and cucumber powdery mildews. *Crop Protection*, 23: 1215-1221.
- Chomnawang, M.T., Surassmo, S., Nukoolkarn, V.S. and Gritsanapan, W. 2005. Antimicrobial effects of Thai medicinal plants against acne-inducing bacteria. *Journal of Ethnopharmacology*, 101: 330-333.
- Chukwujekwu, J.C., Coombes, P.H., Mulholland, D.A. and Staden, J.V. 2006. Emodin, an antibacterial anthraquinone from the roots of *Cassia occidentalis*. *South African Journal of Botany*, 72: 295-297.
- Dahms, M., Lotz, R., Lang, W., Renner, U., Bayer, E., and Langguth, H.S. Elucidation of phase I and phase II metabolic pathway of rhein: species differences and their potential relevance. *Drug Metabolism and Disposition*, 25: 442-452.
- Daya, S., Walker, R.B., Glass, B.D. and Anoopkumar-Dukie, S. 2001. The effect of variation in pH and temperature on stability of melatonin in aqueous solution. *Journal of pineal research*, 31: 155-158.
- Dechatiwongse Na Ayudhya, T., Techadamrongsin, Y. and Jirawattanapong, W. 1993. Chemical Specification of Thai Herbal Drugs. Vol 1. Bangkok: Ministry of Public Health.

- Dewick, M. 2001. Medicinal natural product, a biosynthetic approach. Chichester: John Wiley & Sons Ltd.
- Dhawan, B.M., Patnaik, G.K., Rastogi, R.P., Singh, K.K. and Tandon, J.S. 1977. Screening of Indian plants for biological activity. *Indian journal of experimental biology*, 15: 208-219.
- Dipti, J. 1991. Flavonoid glycoside from *Cassia alata*. *Phytochemistry*, 30: 61-63.
- Du, Y. and Ko, K.M. 2005. Effects of emodin treatment on mitochondrial ATP generation capacity and antioxidant components as well as susceptibility to ischemia-reperfusion injury in rat hearts: Single versus multiple doses and gender difference. *Life Sciences*, 77: 2770-2782.
- Earll, M. 1999. A guide to Log *P* and pKa measurements and their use [online]. Available, <http://www.raell.demon.co.uk/chem/logp/logppka.htm> [cited 2007 April 19].
- Elujoka, B.A., Ajulo, A.A. and Iweibo, G.O. 1989. Chemical and biological analysis of Nigerian *Cassia* species for laxative activity. *Journal of pharmaceutical and biomedical analysis*, 7: 1453-1457.
- Faouzi, A.M., Nasr, B. and Abdellatif, G. 2007. Electrochemical degradation of anthraquinone dye Alizarin Red S by anodic oxidation on boron-doped diamond. *Dyes and Pigments*, 73: 86-89.
- Farnsworth, N.R. and Bunyaphatsara, N. 1992. Thai medicinal plant, recommended for primary health care system. Bangkok: Prachachon.
- Gupta, D.S., Jann, B., Bajpai, K.S. and Sharma, S.C. 1987. Structure of a galactomannan from *Cassia alata* seed. *Carbohydrate research*, 162: 271-276.

- Han, Y.S., Heijden, R.V.D., Lefeber, A.W.M., Erkelens, C. and Verpoorte, R. 2002. Biosynthesis of anthraquinones in cell cultures of *Cinchona* 'Robusta' proceeds via the methylerythritol 4-phosphate pathway. *Phytochemistry*, 59: 45-55.
- Harhaji, L., Mijatovic, S., Maksimovic, I.D., Popadic, D., Isakovic, A., Todorovic-Markovic, B. and Trajkovic, V. 2007. Aloe emodin inhibits the cytotoxic action of tumor necrosis factor. *European Journal of Pharmacology*, 568: 248-259.
- Harrison, J. and Garro, C. 1997. Study on anthraquinone derivatives from *Cassia alata* L. (Leguminosae). *Revista Peruana de Bioquimica*, 1: 31-32.
- Hemlata, S. and Kalidhar, B. 1994. Alatonin, an anthraquinone derivative from *Cassia alata*. *Indian journal of chemistry*, 33: 92-93.
- Hoa, T.Y., Wu, S.L., Chen, J.C., Li, C.C. and Hsiang, C.Y. 2007. Emodin blocks the SARS coronavirus spike protein and angiotensin-converting enzyme 2 interaction. *Antiviral Research*, 74: 92-101.
- Hoffman, B.R., DelasAlas, H., Blanco, K., Wiederhold, N., Lewis, R.E. and Williams, L. 2004. Screening of Antibacterial and antifungal activities of ten medicinal plants from Ghana. *Pharmaceutical Biology*, 42: 13-17.
- Huang, Q., Shen, H.M. and Ong, C.N. 2004. Inhibitory effect of emodin on tumor invasion through suppression of activator protein-1 and nuclear factor-kB. *Biochemical Pharmacology*, 68: 361-371.
- Ibrahim, D. and Osman, H. 1995. Antimicrobial activity of *Cassia alata* from Malaysia. *Journal of ethnopharmacology*, 45: 151-156.

- Jiang, C. and He, J. 2002. Simultaneous determination of aloe-emodin and rhein by synchronous fluorescence spectroscopy. *Journal of Pharmaceutical and Biomedical Analysis*, 29: 737-742.
- Kelly, T., Ross, M., Zhenkun, X. and Wei, E.F. 1994. Revision of the structure of alatinone to emodin. *Phytochemistry*, 36: 253-254.
- Khan, M.R., Kihara, M. and Omoloso, A.D. 2001. Antimicrobial activity of *Cassia alata*. *Fitoterapia*, 72: 561-564.
- Kong, X.Q., Shea, D., Gebreyes, W.A. and Xia, X.R. 2005. Novel hydrophobicity ruler approach for determining the octanol/water partition coefficients of very hydrophobic compounds via their polymer/solvent solution distribution coefficients. *Analytical Chemistry*, 77: 1275-1281.
- Koyama, J., Morita, I., Kobayashi, N., Osakai, T., Nishino, H. and Tokuda, H. 2005. Correlation between reduction potentials and inhibitory effects on Epstein-Barr virus activation of poly-substituted anthraquinones. *Cancer Letters*, 225: 193-198.
- Kuhnert, N. and Molod, H.Y. 2005. An efficient total synthesis of chrysophanol and the sennoside C-aglycone. *Tetrahedron Letters*, 46: 7571-7573.
- Lansa, C., Harperb, T., Georges, K. and Bridgewater, E. 2000. Medicinal plants used for dogs in Trinidad and Tobago. *Preventive Veterinary Medicine*, 45: 201-220.
- Lee, H.Z., Hsu, S.L., Liu, M.C. and Wu, C.H. 2001. Effects and mechanisms of aloe-emodin on cell death in human lung squamous cell carcinoma. *European Journal of Pharmacology*, 431: 287-295.

- Lee, H.Z., Lin, C.J., Yang, W.H., Leung, W.C. and Chang, S.P. 2006. Aloe-emodin induced DNA damage through generation of reactive oxygen species in human lung carcinoma cells. *Cancer Letters*, 239: 55-63.
- Lin, S., Fujii, M. and Hou, D.X. 2003. Rhein induces apoptosis in HL-60 cells via reactive oxygen species-independent mitochondrial death pathway. *Archives of Biochemistry and Biophysics*, 418: 99-107.
- Matulionyte, J., Vengrisa, T., Ragauskasa, R. and Padaruskas, A. 2007. Removal of various components from fixing rinse water by anion-exchange resins. *Desalination*, 208: 81-88.
- Mengs, U., Schuler, D. and Marshall, R.R. 2001. No induction of chromosomal aberrations in Chinese hamster ovary cells by chrysophanol. *Mutation Research*, 492: 69-72.
- Miralles, J. and Gaydou, E.M. 1986. Fatty acid and Sterol composition of oils extracted from seed of three Cassia (Caesalpiniaceae) species from Senegal. *Revue Francaise des Corps Gras*, 33: 381-384.
- Moo, P.R.E., Mena-Rejon, G.J., Quijano, L. and Cedillo-Rivera, R. 2007. Antiprotozoal activity of *Senna racemosa*. *Journal of Ethnopharmacology*, 112: 415-416.
- Morha, F.N.I. and Otumu, H.E. 1991. *Cassia alata* seed constituents. *Jamaica Journal of Sciences and Technology*, 2: 14-16
- Moriyama, H., Umeda, M., Masuda, T. and Ueno, Y. 1998. HPLC quantification of kaempferol-3-O-gentiobioside in *Cassia alata*. *Fitoterapia*, 74: 425-430.
- National Drug Committee. 2000. National List of Essential Drug A.D. 1999 (List of Herbal Medicine). Bangkok: Agricultural Cooperative of Thailand Press Ltd.

- National Health Service. 2005. Colony count by the pour plate method. London: Health Protection Agency.
- Ogunti, E.O. and Elujoba, A.A. 1993. Laxative activity of *Cassia alata*. (Leguminosae) oil leaf Thailand, *Fitoterapia*, 64: 437-439.
- Ordonez, R.M., Ordonez, A.A.L., Sayago, J.E., Moreno, M.I.N. and Isla, M.I. 2006. Antimicrobial activity of glycosidase inhibitory protein isolated from *Cyphomandra betacea* Sendt. fruit. *Character peptides*, 27: 1187-1191.
- Organization for Economic Cooperation and Development. 1995. Guidelines for the testing of chemicals, OECD 107, Partition coefficient (*n*-octanol/water) (Shake flask method), Paris.
- Owoyale, J.A., Olatunji, G.A. and Oguntoye, S.O. 2005. Antifungal and antibacterial activities of an alcoholic extract of *Senna alata* leaves. *Journal of Applied Sciences and Environmental Management*, 9: 105-107.
- Panichayupakaranant, P. and Intaraksa, N. 2003. Distribution of hydroxyanthracene derivatives in *Cassia alata* and the factors affecting the quality of the raw material. *Songklanakarin Journal of Science and Technology*, 25: 497-502.
- Panichayupakaranant, P. and Kaewsuwan, S. 2004. Bioassay-guided isolation of the antioxidant constituent from *Cassia alata* L. leaves. *Songklanakarin Journal of Science and Technology*, 26: 103-107.
- Panichayupakaranant, P., Sakunpak, A., and Sakunphueak, A. (accepted) Quantitative HPLC Determination and extraction of anthraquinones in *Senna alata* leaves. *Journal of Chromatographic Science*.

- Phongpaichit, S., Pujenjob, N., Rukachaisirikul, V. and Ongsakul, M. 2004. Antifungal activity from leaf extracts of *Cassia alata* L., *Cassia fistula* L. and *Cassia tora* L. *Songklanakarinn Journal of Science and Technology*, 26: 741-748.
- Pieme, C.A., Penlap, V.N., Nkegoum, B., Taziebou, C.L., Tekwu, E.M., Etoa, F.X. and Ngongang, J. 2006. Evaluation of acute and subacute toxicities of aqueous ethanolic extract of leaves of *Senna alata* (L.) Roxb (Caesalpinaceae). *African Journal Biotechnology*, 5: 283-289.
- Rai, K.N. and Prasad, S.N. 1994. Chemical examination of the stem of *Cassia alata* Linn. *Journal of the Indian Chemical Society*, 71: 653-754.
- Rai, P.P. 1978. Anthracene derivatives in leaves and fruits of *Cassia alata*. *Current science*, 47: 271-272.
- Rao, J.V.L.N., Sastry, P.S.R., Rao, R.V.K. and Vimaladevi, M. 1975. Occurrence of kaempferol and aloë-emodin in the leaves of *Cassia alata*. *Current science*, 44: 736-737.
- Sabaa, M.W., Oraby, E.H., Naby, A.S.A. and Mohamed, R.R. 2005. Anthraquinone derivatives as organic stabilizers for rigid poly (vinyl chloride) against photo-degradation. *European Polymer Journal*, 41: 2530-2543.
- Sakunphueak, A., Hazanee, A. and Panichayupakaranant, P. 2005. Quantitative analysis of anthraquinone in *Senna alata* leaves. *Proceeding of The Fourth Indochina Conference on Pharmaceutical Science*, 1: 81-83.
- Sanchez, C., Mathyl, H.M., Deberg, M.A., Ficheux, H., Reginster, J.Y.L. and Henrotin, Y.E. 2003. Effect of rhein on human articular chondrocytes in alginate beads. *Biochemical Pharmacology*, 65: 377-388.

- Schorkhuber, M., Richter, M., Dutter, A., Sontag, G. and Marian, B. 1998. Effect of anthraquinone-laxatives on the proliferation and urokinase secretion of normal, premalignant and malignant colonic epithelial cells. *European Journal of Cancer*, 34: 1091-1098.
- Semple, S.J., Pyke, S.M., Reynolds, G.D. and Flower, R.L.P. 2001. *In vitro* antiviral activity of the anthraquinone chrysophanic acid against poliovirus. *Antiviral Research*, 49: 169-178.
- Shen, L., Ji, H.F. and Zhang, H.Y. 2006. Theoretical study on photophysical and photosensitive properties of aloe-emodin. *Journal of Molecular Structure*, 758: 221-224.
- Singh, B.K. and Tiwari, R.D. 1943. Chemical examination of *Cassia alata*. The component acid of the fatty oil from the seeds. *Proceedings of the National Academy of Sciences, India*, 13: 111-119.
- Singh, D.N., Verma, N., Raghuwanshi, S., Shuklab, P.K. and Kulshreshtha, D.K. 2006. Antifungal anthraquinones from *Saprosma fragrans*. *Bioorganic & Medicinal Chemistry Letters*, 16: 4512-4514.
- Singh, R.B. 1998. Polyalcohol from *Cassia alata* Linn. Seed. *Asian journal of chemistry*, 10: 185-186.
- Smith, R.M. and Sadaquat, A. 1979. Anthraquinones from the leaves of *Cassia alata* from Fiji. *New Zealand journal of sciences*, 22: 123-126.
- Sodipo, O.A., Effraim, K.D. and Emmagun, E. 1998. Effect of aqueous leaf extract of *Cassia alata* (Linn.) on some hematological indices in albino rats. *Phytotherapy Research*, 12: 431-433.

- Somchit, M.N., Reezal, I., Elysha, N.I. and Mutalib, A.R. 2002. *In vitro* antimicrobial activity of ethanol and water extracts of *Cassia* sp. *Journal of ethnopharmacology*, 84: 1-4.
- Su, H.Y., Cherng, S.H., Chen, C.C. and Lee, H. 1995. Emodin inhibits the mutagenicity and DNA adducts induced by 1-nitropyrene. *Mutation Research*, 329: 205-212.
- Subcommittee on the establishment of the Thai herbal pharmacopoeia. 1998. Thai Herbal Pharmacopoeia. vol. 1, Bangkok: Prachachon.
- Tamura, T., Kosaka, N., Ishiwa, J., Sato, T., Nagase, H. and Ito, A. 2001. Rhein, an active metabolite of diacerein, down-regulates the production of pro-matrix metalloproteinases-1, -3, -9 and -13 and up-regulates the production of tissue inhibitor of metalloproteinase-1 in cultured rabbit articular chondrocytes. *Journal of the Osteo Arthritis Research Society International*, 9: 257-263.
- Tang, T., Yin, L., Yang, J. and Shan, G. 2007. Emodin, an anthraquinone derivative from *Rheum officinale* Baill, enhances cutaneous wound healing in rats. *European Journal of Pharmacology*, 567: 177-185
- Tariq, M.A., Faisal, M., Saquib, M. and Muneer, M. (IN PRESS). Heterogeneous photocatalytic degradation of an anthraquinone and a triphenylmethane dye derivative in aqueous suspensions of semiconductor. *Dyes and Pigments*, 1-8.
- Tehrany, E.A., Fournier, F. and Desobry, S. 2004. Simple method to calculate octanol-water partition coefficient of organic compounds. *Journal of Food Engineering*, 64: 315-320.
- Tian, B. and Hua, Y. 2005. Concentration-dependence of pro-oxidant and antioxidant effects of aloin and aloe-emodin on DNA. *Food Chemistry*, 91: 413-418.

- Tian, K., Zhang, H., Chena, X. and Hua, Z. 2006. Determination of five anthraquinones in medicinal plants by capillary zone electrophoresis with β -cyclodextrin addition. *Journal of Chromatography A*, 1123: 134-137.
- Tierra, M. 1999. Why standardized herbal extracts? An herbalist's perspective [Online]. Available, <http://www.planetherbs.com/articles/standardized%20extracts.htm> [cited 2007 April 21].
- Trease, G.E. and Evans, I.C. 1983. *Pharmacognosy*. 12th ed. London: Bailliere Tindall.
- Vargas, F.R., Díaz, Y.H. and Carbonell, K.M. 2004. Antioxidant and scavenging activity of emodin, aloe-emodin, and rhein on free-radical and reactive oxygen species. *Pharmaceutical Biology*, 42: 342-348.
- Wang, C., Wu, X., Chena, M., Duana, W., Sunb, L., Yan, M. and Zhang, L. 2007. Emodin induces apoptosis through caspase 3-dependent pathway in HK-2 cells. *Toxicology*, 231: 120-128.
- Wang, J., Huang, H., Liu, P., Tang, F., Qin, J., Huang, W., Chen, F., Guo, F., Liu, W. and Yang, B. 2006. Inhibition of phosphorylation of p38 MAPK involved in the protection of nephropathy by emodin in diabetic rats. *European Journal of Pharmacology*, 553: 297-303.
- Wang, R., Wan, Q., Zhang, Y., Huang, F., Yu, K., Xu, D., Wang, Q. and Sun, J. 2007. Emodin suppresses interleukin-1 β -induced mesangial cells proliferation and extracellular matrix production via inhibiting P-38 MAPK. *Life Sciences*, 80: 2481-2488.
- Xiao, B., Guo, J., Liu, D. and Zhang, S. 2007. Aloe-emodin induces in vitro G2/M arrest and alkaline phosphatase activation in human oral cancer KB cells. *Oral Oncology*. 43: 905-910.

- Yadav, K. and Kalidhar, B. 1994. Aluinone: an anthraquinone from *Cassia alata*. *Planta medica*, 60: 601.
- Yen, G.C., Duh, P.D. and Chuang, D.Y. 2000. Antioxidant activity of anthraquinones and anthrone. *Food Chemistry*, 70: 437-441.
- Yi, L., Jian-Ping, G., Xua, X. and Lixin, D. 2006. Simultaneous determination of baicalin, rhein and berberine in rat plasma by column-switching high-performance liquid chromatography. *Journal of Chromatography B*, 838: 50-55.
- Zheyu, C., Qinghui, Q.I., Lixin, L., Tao, M.A., Xu, J., Zhang, L. and Lunan, Y. 2006. Effects of emodin on Ca²⁺ signal transduction of smooth muscle cells in multiple organ dysfunction syndrome1. *Journal of Surgical Research*, 131: 80-85.