

## DAFTAR PUSTAKA

- Asasutjarit, R., Rathapon Meesomboon, Tunradee Adulheem, Pheeraphong Kittiwisut, Siriporn Sookdee, Papawee Samosornsuk, Worada Fuongfuchat, dan Asira, 2019, Physicochemical properties of alpha-mangostin loaded nanomeulsions prepared by ultrasonication technique, *Heliyon*. Elsevier Ltd, 5(9), p. e02465.
- Aisha, A. F., Ismail, Z., Abu-Salah, K. M., & Majid, A. M. S. A., 2012, Solid dispersions of  $\alpha$ -mangostin improve its aqueous solubility through self-assembly of nanomicelles, *Journal of pharmaceutical sciences*, 101(2), 815-825.
- Benjakul, R., Ruthairat Kongkaneramt, Lalana Sarisuta, Narong Moongkarndi, Primchanien Müller-Goymann, dan Christel C., 2015, Cytotoxic effect and mechanism inducing cell death of  $\alpha$ -mangostin liposomes in various human carcinoma and normal cells, *Anti-Cancer Drugs*, 26(8), pp. 824–834.
- Cai, N., an Xie, Shu Juan Qiu, Dong Bo Jia, Chang Chang Du, Cong Liu, Wei Chen, Jia Jie Zhang, dan Qi, 2016, Potential effects of  $\alpha$ -mangostin in the prevention and treatment of hepatocellular carcinoma, *Journal of Functional Foods*. Elsevier Ltd, 26, pp. 309–318.
- Chang, H. F., Wu, C. H. and Yang, L. L., 2013, Antitumour and free radical scavenging effects of  $\gamma$ -mangostin isolated from *Garcinia mangostana* pericarps against hepatocellular carcinoma cell, *Journal of Pharmacy and Pharmacology*, 65(9), pp. 1419–1428.
- Chen, G., Guoqing Li, Yong Wang, Wei Deng, dan Liping, 2018, Bioactivity and pharmacological properties of  $\alpha$ -mangostin from the mangosteen fruit: a review', *Expert Opinion on Therapeutic Patents*. Taylor & Francis, 28(5), pp. 415–427.
- Chen, Z. L., Zhi Lan Huang, Man Wang, Xia Rong Fu, Jun Han, Min Shen, You Qing Xia, Zheng Gao, dan Jian Qing, 2016, Transferrin-modified liposome promotes  $\alpha$ -mangostin to penetrate the blood-brain barrier, *Nanomedicine*:

- Nanotechnology, Biology, and Medicine*. Elsevier B.V., 12(2), pp. 421–430.
- Choi, Y. H., Young Hee Han, Seung Yon Kim, You Jin Kim, Young Mi Chin, dan Young Won, 2014, Absorption, tissue distribution, tissue metabolism and safety of  $\alpha$ -mangostin in mangosteen extract using mouse models, *Food and Chemical Toxicology*. Elsevier Ltd, 66, pp. 140–146.
- Dhanasekaran, R., Bandoh, S. and Roberts, L. R., 2016, Molecular pathogenesis of hepatocellular carcinoma and impact of therapeutic advances, *F1000Research*, 5(May), pp. 1–15.
- Doan, V. T. H., Van T.H. Lee, Ji Ha Takahashi, Rintaro Nguyen, Phuong T.M. Nguyen, Van Anh T. Pham, Huong T.T. Fujii, Shota Sakurai, dan Kazuo, 2020, Cyclodextrin-based nanoparticles encapsulating  $\alpha$ -mangostin and their drug release behavior: potential carriers of  $\alpha$ -mangostin for cancer therapy, *Polymer Journal*. Springer US, 52(4), pp. 457–466.
- Elsaid Ali, A. A., Taher, M. and Mohamed, F., 2013, Microencapsulation of alpha-mangostin into PLGA microspheres and optimization using response surface methodology intended for pulmonary delivery, *Journal of Microencapsulation*, 30(8), pp. 728–740.
- Fazry, S., Shazrul Noordin, Muhammad Akram Mohd Sanusi, Salahuddin Noor, Mahanem Mat Aizat, Wan Mohd Lazim, Azwan Mat Dyari, Herryawan Ryadi Eziwar Jamar, Nur Hidayah Remali, Juwairiah Othman, Babul Airianah Law, Douglas Sidik, Nik Marzuki Cheah, Yew Hoong Lim, dan Yi Chieh, 2018, Cytotoxicity and toxicity evaluation of xanthone crude extract on hypoxic human hepatocellular carcinoma and zebrafish (*Danio rerio*) embryos, *Toxics*, 6(4).
- Gutierrez-Orozco, F. dan Failla, M. L., 2013, Biological activities and bioavailability of mangosteen xanthones: A critical review of the current evidence, *Nutrients*, 5(8), pp. 3163–3183.
- Han, S. Y., Seung Yon You, Byoung Hoon Kim, Yu Chul Chin, Young Won Choi, dan Young Hee, 2015, Dose-independent ADME properties and tentative identification of metabolites of  $\alpha$ -mangostin from *Garcinia*

mangostana in mice by automated microsampling and UPLC-MS/MS methods, *PLoS ONE*, 10(7), pp. 1–16.

Hsieh, S. C., Shu Ching Huang, Min Hsien Cheng, Chun Wen Hung, Jyun Hao Yang, Shun Fa Hsieh, dan Yi Hsien, 2013,  $\alpha$ -mangostin induces mitochondrial dependent apoptosis in human hepatoma SK-Hep-1 cells through inhibition of p38 MAPK pathway, *Apoptosis*, 18(12), pp. 1548–1560.

Huang, C. F., Chien Feng Teng, Ying Hock Lu, Fung Jou Hsu, Wen Hung Lin, Chia Liang Hung, Chia Chen Tung, Jai Nien Hsieh, Yi Hsien Liu, dan Chung Jung, 2017,  $\beta$ -mangostin suppresses human hepatocellular carcinoma cell invasion through inhibition of MMP-2 and MMP-9 expression and activating the ERK and JNK pathways, *Environmental Toxicology*, 32(11), pp. 2360–2370.

Ibrahim, M. Y., Mohamed Yousif Hashim, Najihah Mohamed Mohan, Syam Abdulla, Mahmood Ameen Abdelwahab, Siddig Ibrahim Arbab, Ismail Adam Yahayu, Maizatulkmal Ali, Landa Zeenelabdin Ishag, dan Omer Elhag, 2015,  $\alpha$ -Mangostin from *Cratoxylum arborescens*: An in vitro and in vivo toxicological evaluation, *Arabian Journal of Chemistry*. King Saud University, 8(1), pp. 129–137.

Ibrahim, M. Y., Mohamed Yousif Hashim, Najihah Mohd Mariod, Abdalbasit Adam Mohan, Syam Abdulla, Mahmood Ameen Abdelwahab, Siddig Ibrahim Arbab, dan Ismail Adam, 2016,  $\alpha$ -Mangostin from *Garcinia mangostana* Linn: An updated review of its pharmacological properties, *Arabian Journal of Chemistry*. King Saud University, 9(3), pp. 317–329.

Jindarat, S., 2014, Xanthones from mangosteen (*Garcinia mangostana*): Multi-targeting pharmacological properties', *Journal of the Medical Association of Thailand*, 97(2011), pp. S196–S201.

Jo, M. J., Jin, I. S., Park, C. W., Hwang, B. Y., Chung, Y. B., Kim, J. S., & Shin, D. H., 2020, Revolutionizing technologies of nanomicelles for combinatorial anticancer drug delivery, *Archives of Pharmacal Research*,

1-10.

- Kittipaspallop, W., Wannakarn Taepavarapruk, Pornnarin Chanchao, Chanpen Pimtong, dan Wittaya, 2018, Acute toxicity and teratogenicity of  $\alpha$ -mangostin in zebrafish embryos, *Experimental Biology and Medicine*, 243(15–16), pp. 1212–1219.
- Kumar, V., 2019, Solid Lipid Nanoparticle of Alpha-Mangostin Exerts Diethylnitrosamine-Induced Hepatocellular Carcinoma via Alteration of PI3K/Akt Pathway, *Gut & Liver*, 13.
- Lestari, N., Novriantika Pratama, Samuel Gotama, Kelvin Theandro Soetikno, Vivian Louisa, dan Melva, 2019, Antioxidative activity of alpha-mangostin in acetaldehyde-induced hepatic stellate cells: An in vitro study, *International Journal of Applied Pharmaceutics*, 11(1), pp. 164–167.
- Li, L. *et al.*, 2011, Pharmacokinetics of  $\alpha$ -mangostin in rats after intravenous and oral application, *Molecular Nutrition and Food Research*, 55(SUPPL. 1), pp. 67–74.
- Mohamed, G. A., Gamal A. Al-Abd, Ahmed M. El-halawany, Ali M. Abdallah, Hossam M. Ibrahim, dan Sabrin R.M., 2017, New xanthonenes and cytotoxic constituents from *Garcinia mangostana* fruit hulls against human hepatocellular, breast, and colorectal cancer cell lines, *Journal of Ethnopharmacology*. Elsevier, 198, pp. 302–312.
- Morelli, C. F., Carlo F. Biagiotti, Marco Pappalardo, Valeria M. Rabuffetti, Marco Speranza, dan Giovanna, 2015, Chemistry of  $\alpha$ -mangostin. Studies on the semisynthesis of minor xanthonenes from *Garcinia mangostana*, *Natural Product Research*, 29(8), pp. 750–755.
- Nielsen, K. F., Mogensen, J. M., Johansen, M., Larsen, T. O., & Frisvad, J. C., 2009, Review of secondary metabolites and mycotoxins from the *Aspergillus niger* group, *Analytical and bioanalytical chemistry*, 395(5), 1225-1242.
- Pedraza-Chaverri, J., José Cárdenas-Rodríguez, Noemí Orozco-Ibarra, Marisol

- Pérez-Rojas, dan Jazmin M., 2008, Medicinal properties of mangosteen (*Garcinia mangostana*), *Food and Chemical Toxicology*. Elsevier Ltd, 46(10), pp. 3227–3239.
- Pham, D. T., Saelim, N. dan Tiyafoonchai, W., 2019, Alpha mangostin loaded crosslinked silk fibroin-based nanoparticles for cancer chemotherapy, *Colloids and Surfaces B: Biointerfaces*. Elsevier, 181(June), pp. 705–713.
- Ramaiya, A., Atulkumar Li, Gongbo M. Petiwala, Sakina J. Johnson, dan Jeremy, 2012, Single Dose Oral Pharmacokinetic Profile of  $\alpha$ -Mangostin in Mice, *Current Drug Targets*, 13(14), pp. 1698–1704.
- Richard, S. A., Seidu A. Zheng, Songping Su, Zhaoliang Gao, Jing Xu, dan Huaxi, 2017, The Pivotal Neuroinflammatory, Therapeutic and Neuroprotective Role of Alpha-Mangostin, *Journal of Neurology Research*, 7(4–5), pp. 67–79.
- Sahoo, C. K., Reddy, G. S., Vojjala, A., dan Reddy, B. V., 2018, Bioavailability enhancement for poorly soluble drugs: A review, *Innoriginal: International Journal Of Sciences*, 1-6.
- Samprasit, W., Wipada Rojanarata, Theerasak Akkaramongkolporn, Prasert Ngawhirunpat, Tanasait Kaomongkolgit, Ruchadaporn Opanasopit, dan Praneet, 2015, Fabrication and In Vitro/In Vivo Performance of Mucoadhesive Electrospun Nanofiber Mats Containing  $\alpha$ -Mangostin, *AAPS PharmSciTech*, 16(5), pp. 1140–1152.
- Singh, S. S., 2006, Preclinical pharmacokinetics: an approach towards safer and efficacious drugs, *Current drug metabolism*, 7(2), 165-182.
- Sodalee, K., Kun Sapsuphan, Pimchanok Wongsirikul, Ratta Puttipipatkachorn, dan Satit, 2016, Preparation and evaluation of alpha-mangostin solid self-emulsifying drug delivery system, *Asian Journal of Pharmaceutical Sciences*. Elsevier B.V., 11(1), pp. 225–226.
- Syam, S., Suvitha Bustamam, Ahmad Abdullah, Rasedee Sukari, Mohamed Aspollah Hashim, Najihah Mohd Yahayu, Maizatulkmal Hassandarvish,

- Pouya Mohan, Syam Abdelwahab, dan Siddig Ibrahim, 2014, Cytotoxicity and Oral Acute Toxicity Studies of  $\beta$ -mangostin Isolated from *Cratoxylum arborescens*, *Pharmacognosy Journal*, 6(1), pp. 47–56.
- Syam, S., Bustamam, A., Abdullah, R., Aspollah Sukari, M., Mohd Hashim, N., Yahayu, M., dan Ibrahim Abdelwahab, S., 2014, Cytotoxicity and Oral Acute Toxicity Studies of  $\beta$ -mangostin Isolated from *Cratoxylum arborescens*, *Pharmacognosy Journal*, 6(1).
- Tagaram, H. R. S., Hephzibah Rani S. DiVittore, Nicole A. Barth, Brian M. Kaiser, James M. Avella, Diego Kimchi, Eric T. Jiang, Yixing Isom, Harriet C. Kester, Mark Staveley-O'Carroll, dan Kevin F., 2011, Nanoliposomal ceramide prevents in vivo growth of hepatocellular carcinoma, *Gut*, 60(5), pp. 695–701.
- Tousian Shandiz, H., Razavi, B. M. dan Hosseinzadeh, H., 2017, Review of *Garcinia mangostana* and its Xanthenes in Metabolic Syndrome and Related Complications, *Phytotherapy Research*, 31(8), pp. 1173–1182.
- Vermeulen, K., Van Bockstaele, D. R., & Berneman, Z. N., 2003, The cell cycle: a review of regulation, deregulation and therapeutic targets in cancer, *Cell proliferation*, 36(3), 131-149.
- Wang, A., Anqi Zhou, Fayang Li, Dan Lu, Jin Jian Wang, Yitao dan Lin, Ligen, 2019,  $\gamma$ -Mangostin alleviates liver fibrosis through Sirtuin 3-superoxide-high mobility group box 1 signaling axis, *Toxicology and Applied Pharmacology*. Elsevier, 363(November 2018), pp. 142–153.
- Wathoni, N., Nasrul Rusdin, Agus Motoyama, Keiichi Joni, I. Made Lesmana, Ronny Muchtaridi, dan Muchtaridi, 2020, Nanoparticle drug delivery systems for  $\alpha$ -mangostin, *Nanotechnology, Science and Applications*, 13, pp. 23–36.
- Wathoni, N., Rusdin, A., Febriani, E., Purnama, D., Daulay, W., Azhary, S. Y., dan Muchtaridi, M., 2019, Formulation and characterization of  $\alpha$ -mangostin in chitosan nanoparticles coated by sodium alginate, sodium silicate, and polyethylene glycol, *Journal of Pharmacy And Bioallied Sciences*, 11(8),

619.

- Willson, C. M. dan Grundmann, O., 2017, In vitro assays in natural products research—a matter of concentration and relevance to in vivo administration using resveratrol,  $\alpha$ -mangostin/ $\gamma$ -mangostin and xanthohumol as examples, *Natural Product Research*. Taylor & Francis, 31(5), pp. 492–506.
- Wudtiwai, B., Pitchakarn, P. dan Banjerdpongchai, R., 2018, Alpha-mangostin, an active compound in *Garcinia mangostana*, abrogates anoikis-resistance in human hepatocellular carcinoma cells, *Toxicology in Vitro*. Elsevier Ltd, 53, pp. 222–232.
- Yates, P., dan Bhat, H. B., 1968, Structure of  $\beta$ -mangostin, *Canadian Journal of Chemistry*, 46(23), 3770-3772.
- Yu, L. G., 2017, Cancer cell resistance to anoikis: MUC1 glycosylation comes to play.
- Zhang, H., Hai Tan, Yu ping Zhao, Lin Wang, Lun Fu, Nai jie Zheng, Song ping Shen, dan Xiao fei, 2020, Anticancer activity of dietary xanthone  $\alpha$ -mangostin against hepatocellular carcinoma by inhibition of STAT3 signaling via stabilization of SHP1, *Cell Death and Disease*. Springer US, 11(1). doi: 10.1038/s41419-020-2227-4.
- Zhang, X., Huang, Y., & Li, S., 2014, Nanomicellar carriers for targeted delivery of anticancer agents, *Therapeutic delivery*, 5(1), 53-68.
- Zhang, K. J. *et al.*, 2017, Anticarcinogenic Effects of  $\alpha$ -Mangostin: A Review', *Planta Medica*, 83(3–4), pp. 188–202.