

DAFTAR PUSTAKA

- Aghdam, S.G., Ebrazeh, M., Hemmatzadeh, M., Seyfizadeh, N., Shabgah, A.G., Azizi, G., Ebrahimi, N., Babaie, F., Mohammadi, H., 2019. The role of microRNAs in prostate cancer migration, invasion, and metastasis. *J. Cell. Physiol.* 234: 9927–9942.
- Aka, A.J., Lin, S.X., 2012. Comparison of Functional Proteomic Analyses of Human breast cancer cell line T47D and MCF7. *PLoS ONE.* 7. e31532.
- American cancer society, 2017, Breast cancer. <https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/breast-cancer-facts-and-figures/breast-cancer-facts-and-figures-2019-2020.pdf> (diakses pada 10 mei 2020)
- Ananta, J.S., Paulmurugan, R., Massoud, T.F., 2016. Tailored nanoparticle codelivery of antimiR-21 and antimiR-10b augments glioblastoma cell kill by temozolomide: Toward a “personalized” anti-microRNA therapy. *Mol. Pharm.* 13: 3164–3175.
- Anwar, S.L., Haryono, S.J., Aryandono, T., Haryana, S.M., 2017. Micro-RNA: Biogenesis, Fungsi, dan Perannya dalam Proses Karsinogenesis dan Penatalaksanaan Kanker. Gadjah Mada University Press, Yogyakarta.
- Ariff, S.A.Y., Yusoff, K., Masarudin, M.J., 2017. Encapsulation of miRNA in chitosan nanoparticles as a candidate for an anti-metastatic agent in cancer therapy. *Malaysian Appl. Biol.* 46: 165–170.
- Cao Y, Tan YF, Wong YS, Liew MWJ, Venkatraman S. 2019. Recent advances in chitosan-based carriers for gene delivery. *Mar Drugs.* 17(6).
- Cunningham, D., You, Z., 2015. In vitro and in vivo model systems used in prostate cancer research. *J. Biol. methods* 2: 1–14.
- Chen, Y., Gao, D.Y., Huang, L., 2015. In vivo delivery of miRNAs for cancer therapy: Challenges and strategies. *Adv Drug Deliv Rev.* 81:128-141.
- Chen, X., Gu, S., Chen, B.F., Shen, W.L., Yin, Z., Xu, G.W., Hu, J.J., Zhu, T., Li, G., Wan, C., Ouyang, H.W., Lee, T.L., Chan, W.Y., 2015. Nanoparticle delivery of stable miR-199a-5p agomir improves the osteogenesis of human mesenchymal stem cells via the HIF1a pathway. *Biomaterials* 53: 239–250.

- Crumbaker, M., Khoja, L., Joshua, A.M., 2017. AR signaling and the PI3K pathway in prostate cancer. *Cancers (Basel)*. 9: 1–15.
- Debnath, S., Suresh Kumar, R., Niranjana Babu, M., 2011. Ionotropic gelation - A novel method to prepare chitosan nanoparticles. *Res. J. Pharm. Technol.* 4: 492–495.
- Donzelli, S., Cioce, M., Muti, P., Strano, S., Yarden, Y., Blandino, G., 2016. MicroRNAs: Non-coding fine tuners of receptor tyrosine kinase signalling in cancer. *Semin. Cell Dev. Biol.* 50: 133–142.
- Du, C., Zhang, X., Yao, M., Lv, K., Wang, J., Chen, L., Chen, Y., Wang, S., Fu, P., 2018. Bcl-2 promotes metastasis through the epithelial-to-mesenchymal transition in the BCcap37 medullary breast cancer cell line. *Oncol. Lett.* 15: 8991–8998.
- Fu, Q., Gao, Y., Yang, F., Mao, T., Sun, Z., Wang, H., Song, B., Li, X., 2018. Suppression of microRNA-454 impedes the proliferation and invasion of prostate cancer cells by promoting N-myc downstream-regulated gene 2 and inhibiting WNT/ β -catenin signaling. *Biomed. Pharmacother.* 97: 120–127.
- Ganju, A., Khan, S., Hafeez, B.B., Behrman, S.W., Yallapu, M.M., Chauhan, S.C., Jaggi, M., 2017. miRNA nanotherapeutics for cancer. *Drug Discov. Today* 22: 424–432.
- Gaur, S., Wen, Y., Song, J.H., Parikh, N.U., Mangala, L.S., Blessing, A.M., Ivan, C., Wu, S.Y., Varkaris, A., Shi, Y., Lopez-Berestein, G., Frigo, D.E., Sood, A.K., Gallick, G.E., 2015. Chitosan nanoparticle-mediated delivery of miRNA-34a decreases prostate tumor growth in the bone and its expression induces non-canonical autophagy. *Oncotarget*. 6
- Genecards, 2019. Mir 106b-5p gene. <https://www.genecards.org/cgi-bin/carddisp.pl?gene=MIR106B&keywords=mir,106b> (diakses pada 10 mei 2019)
- Genecards, 2019. PTEN gene. <https://www.genecards.org/cgi-bin/carddisp.pl?gene=PTEN&keywords=PTEN> (diakses pada 24 juli 2019).
- Ghaemi, Z., Soltani, B.M., Mowla, S.J., 2019. MicroRNA-326 functions as a tumor suppressor in breast cancer by targeting ErbB/PI3K signaling pathway. *Front. Oncol.* 9: 653.

- Goto, Y., Kurozumi, A., Enokida, H., Ichikawa, T., Seki, N., 2015. Functional significance of aberrantly expressed microRNAs in prostate cancer. *Int. J. Urol.* 22: 242–252.
- Guo, X., Han, T., Hu, P., Guo, X., Zhu, C., Wang, Y., Chang, S., 2018. Five microRNAs in serum as potential biomarkers for prostate cancer risk assessment and therapeutic intervention. *Int. Urol. Nephrol.* 50: 2193–2200.
- Guzel, E., Karatas, O.F., Semercioz, A., Ekici, S., Aykan, S., Yentur, S., Creighton, C.J., Ittmann, M., Ozen, M., 2015. Identification of microRNAs differentially expressed in prostatic secretions of patients with prostate cancer. *Int. J. Cancer* 136: 875–879.
- Haldar, S., Negrini, M., Monne, M., Sabbioni, S., Croce, C.M., 1994. Down-Regulation of bcl-2 by p53 in Breast Cancer Cells. *Cancer Res.* 54: 2095–2097.
- Hopkins, D.B., Hodakoski, C., Barrows, D., Mense, S., Parsons, E.R., 2014. Pten function the long and the short of it. *Biochem sci.* 39 (4): 183-190.
- Hemann, M, T., Lowe, S.W., 2006. The p53-BCL2 Connection. *Cell death Filter.* 13; 1256-1259.
- Howard EW, Yang X. 2018. MicroRNA Regulation in Estrogen Receptor-Positive Breast Cancer and Endocrine Therapy. *Biol Proced Online.* 20(1):1–19.
- Iswandana, R., Anwar, E., Jufri, M., 2013. Formulasi Nanopartikel Verapamil Hidroklorida dari Kitosan dan Natrium Tripolifosfat dengan Metode Gelasi Ionik. *J. Farm. Indones.* 6:201–210.
- Jansson, M.D., Lund, A.H., 2012. MicroRNA and cancer. *Mol. Oncol.* 6: 590–610.
- Karimi, M., Avci, M., Gazori, T., Hamblin, M.R., Naderi-Manesh, H., 2013. Evaluation of Chitosan-Tripolyphosphate Nanoparticles as a p-shRNA Delivery Vector: Formulation, Optimization and Cellular Uptake Study. *J Nanopharm Drug Deliv.* 1: 266-278178.
- Katas, H., Alpar, H.O., 2006. Development and characterization of chitosan nanoparticles for siRNA delivery. *J. Control. Release* 115: 216-225.
- Kemenkes, Komite Penanggulangan Kanker Nasional. 2017. Pedoman Nasional Pelayanan Kedokteran: Kanker Payudara. Kementerian Kesehatan. Indonesia.

- Li, N., Miao, Y., Shan, Y., Liu, B., Li, Y., Zhao, L., Jia, L., 2017. MiR-106b and miR-93 regulate cell progression by suppression of PTEN via PI3K/Akt pathway in breast cancer. *Cell Death Dis.* 8: e2796.
- Liu, Z., Jiao, Y., Wang, Y., Zhou, C., Zhang, Z., 2008. Polysaccharides-based nanoparticles as drug delivery systems. *Adv. Drug Deliv. Rev.* 60: 1650–1662.
- Lin, S., Gregory, R.I., 2015. MicroRNA biogenesis pathways in cancer. *Nat. Rev. Cancer* 15: 321–333.
- Lumachi F, Brunello A, Maruzzo M, Basso U, Basso S. 2013. Treatment of Estrogen Receptor-Positive Breast Cancer. *Curr Med Chem.* 20(5):596–604.
- Luu, H.N., Lin, H.Y., Sørensen, K.D., Ogunwobi, O.O., Kumar, N., Chornokur, G., Phelan, C., Jones, D., Kidd, L.C., Batra, J., Yamoah, K., Berglund, A., Rounbehler, R.J., Yang, M., Lee, S.H., Kang, N., Kim, S.J., Park, J.Y., Di Pietro, G., 2017. miRNAs associated with prostate cancer risk and progression. *BMC Urol.* 17: 1–18.
- MacGregor Schafer, J., Lee, E.S., O'Regan, R.M., Yao, K., Jordan, V.C., 2000. Rapid development of tamoxifen-stimulated mutant p53 breast tumors (T47D) in athymic mice. *Clin. Cancer Res.* 6: 4373–4380.
- Mansouri, S., Lavigne, P., Corsi, K., Benderdour, M., Beaumont, E., Fernandes, J.C., 2004. Chitosan-DNA nanoparticles as non-viral vectors in gene therapy: Strategies to improve transfection efficacy. *Eur. J. Pharm. Biopharm.* 57: 1–8.
- Mao, S., Sun, W., Kissel, T., 2010. Chitosan-based formulations for delivery of DNA and siRNA. *Adv. Drug Deliv. Rev.* 62: 12–27.
- Martien, R., Adhyatmika, Irianto, I.D.K., Farida, V., Sari, D.P., 2012. Perkembangan teknologi nanopartikel sebagai sistem penghantaran obat. *Maj. Farm.* 8: 133–144.
- MacGregor Schafer, J., Lee, E.S., O'Regan, R.M., Yao, K., Jordan, V.C., 2000. Rapid development of tamoxifen-stimulated mutant p53 breast tumors (T47D) in athymic mice. *Clin. Cancer Res.* 6: 4373–4380.
- Mehlich, D., Garbicz, F., Włodarski, P.K., 2018. The emerging roles of the polycistronic miR-106b~25 cluster in cancer – A comprehensive review. *Biomed. Pharmacother.* 107: 1183–1195.

- Merino, D., Lok, S.W., Visvader, J.E., Lindeman, G.J., 2016. Targeting BCL-2 to enhance vulnerability to therapy in estrogen receptor-positive breast cancer. *Oncogene* 35: 1877–1887.
- Mohammed, M.A., Syeda, J.T.M., Wasan. K.M., Wasan, E.K., 2017. An overview of chitosan nanoparticles and its application in non-parenteral drug delivery. *Pharmaceutics*. 9:1-26.
- Moi, L., Braaten, T., Khalid, A., Lund, E., Busund, L.T.J., 2019. Differential expression of the miR-17-92 cluster and miR-17 family in breast cancer according to tumor type results from the Norwegian women and cancer (nowac) study. *J Transl Med*. 17:334.
- Mulrane, L., McGee, S.F., Gallagher, W.M., O'Connor, D.P., 2013. miRNA dysregulation in breast cancer. *Cancer Res*. 73: 6554–6562.
- Nidhin, M., Indumathy, R., Sreeram, K.J., Nair, B.U., 2008. Synthesis of iron oxide nanoparticles of narrow size distribution on.pdf>. *Bull.Mater. Sci*. 31:93-96.
- Nguyen, D.D., Chang, S., 2018. Development of novel therapeutic agents by inhibition of oncogenic microRNAs. *Int. J. Mol. Sci*. 19: 1–17.
- Park, K., Lee, S., Kang, E., Kim, K., Choi, K., Kwon, I.C., 2009. New generation of multifunctional nanoparticles for cancer imaging and therapy. *Adv. Funct. Mater*. 19: 1553–1566.
- Pellegrino, T., Sperling, R.A., Alivisatos, A.P., Parak, W.J., 2008. Gel Electrophoresis of Gold-DNA Nanoconjugates. *J. Biomed. Biotechnol*. 2007: 1-9.
- Poliseno, L., Salmena, L., Riccardi, L., Fornari, A., Song, M.P., Hobbs, R.M., *et al.*, 2010. Identification of the miR-106b~25 MicroRNA Cluster as a proto-oncogenic PTEN targeting intron that cooperates with its host gene MCM7 in transformation. *Sci Signal*. 3:117.
- Porkka, K.P., Pfeiffer, M.J., Waltering, K.K., Vessella, R.L., Tammela, T.L.J., Visakorpi, T., 2007. MicroRNA expression profiling in prostate cancer. *Cancer Res*. 67: 6130–6135.
- Rampino, A., Borgogna, M., Blasi, P., Bellich, B., Cesàro, A., 2013. Chitosan nanoparticles: Preparation, size evolution and stability. *Int. J. Pharm*. 455: 219–228.

- Ragelle, H., Vandermeulen, G., Pr at, V., 2013. Chitosan-based siRNA delivery systems. *J. Control. Release* 172: 207–218.
- Reitan, N.K., Maurstad, G., de Lange Davies, C., Strand, S.P., 2009. Characterizing DNA condensation by structurally different chitosans of variable gene transfer efficacy. *Biomacromolecules*. 10:1508.
- Rupaimoole, R., Slack, F.J., 2017. MicroRNA therapeutics: towards a new era for the management of cancer and other diseases. *Nat. Rev. Drug Discov.* 16: 203–222.
- Santos-Carballal, B., Aaldering, L.J., Ritzefeld, M., Pereira, S., Sewald, N., Moerschbacher, B.M., G tte, M., Goycoolea, F.M., 2015. Physicochemical and biological characterization of chitosan-microRNA nanocomplexes for gene delivery to MCF-7 breast cancer cells. *Sci. Rep.* 5: 1–15.
- Senthilraja, P., Kathiresan, K., 2015. In vitro cytotoxicity MTT assay in vero, HepG2 and MCF-7 cell lines study of marine yeast. *J. Appl. Pharm. Sci.* 5: 80–84.
- Shah, R., Rosso, K., David Nathanson, S., 2014. Pathogenesis, prevention, diagnosis and treatment of breast cancer. *World J. Clin. Oncol.* 5: 283–298.
- Shenouda, S.K., Alahari, S.K., 2009. MicroRNA function in cancer: Oncogene or a tumor suppressor? *Cancer Metastasis Rev.* 28: 369–378.
- Shi, Y., Paluch, B.E., Wang, X., Jiang, X., 2012. PTEN at a glance. *J. Cell Sci.* 125: 4687–4692.
- Sobel, R.E., Sadar, M.D., 2005. Cell lines used in prostate cancer research: A compendium of old and new lines - Part 1. *J. Urol.* 173: 342–359.
- Song, M.S., Salmena, L., Pandolfi, P.P., 2012. The functions and regulation of the PTEN tumour suppressor. *Nat. Rev. Mol. Cell Biol.* 13: 283–296.
- Svoronos, A.A., Engelman, D.M., Slack, F.J., 2016. OncomiR or tumor suppressor? The duplicity of MicroRNAs in cancer. *Cancer Res.* 76: 3666–3670.
- Teplyuk, N.M., Uhlmann, E.J., Gabriely, G., Volfovsky, N., Wang, Y., Teng, J., Karmali, P., Marcusson, E., Peter, M., Mohan, A., Kravtsov, Y., Cialic, R., Chiocca, E.A., Godlewski, J., Tannous, B., Krichevsky, A.M., 2016. Therapeutic potential of targeting microRNA-10b in established intracranial glioblastoma: first steps toward the clinic. *EMBO Mol. Med.* 8: 268–287.

- Torre, L., Rebecca Siegel, A.J., 2015. Global Cancer Facts & Figures 3rd Edition. *Am. Cancer Soc.*
- Vanacore, D., Boccellino, M., Rossetti, S., Cavaliere, C., D'Aniello, C., Di Franco, R., Romano, F.J., Montanari, M., La Mantia, E., Piscitelli, R., Nocerino, F., Cappuccio, F., Grimaldi, G., Izzo, A., Castaldo, L., Pepe, M.F., Malzone, M.G., Iovane, G., Ametrano, G., Stiuso, P., Quagliuolo, L., Barberio, D., Perdonà, S., Muto, P., Montella, M., Maiolino, P., Veneziani, B.M., Botti, G., Caraglia, M., Facchini, G., 2017. Micrnas in prostate cancer: an overview. *Oncotarget* 8: 50240–50251.
- Van Slooten, H.J., Van De Vijver, M.J., Van De Velde, C.J.H., Van Dierendonck, J.H., Duval, C., Pallud, C., Mandard, A.M., Delobelle-Deroide, A., 1998. Loss of Bcl-2 in invasive breast cancer is associated with high rates of cell death, but also with increased proliferative activity. *Br. J. Cancer* 77: 789–796.
- Xu-Monette, Z.Y., Jeffrey Medeiros, L., Li, Y., Orłowski, R.Z., Andreeff, M., Bueso-Ramos, C.E., Greiner, T.C., McDonnell, T.J., Young, K.H., 2012. Dysfunction of the TP53 tumor suppressor gene in lymphoid malignancies. *Blood* 119: 3668–3683.
- Wen, X., 2016. The PI3K AKT pathway in the pathogenesis of prostate cancer. *Front. Biosci.* 21: 1084–1091.
- Wu, Y. ling, Mehew, J.W., Heckman, C.A., Arcinas, M., Boxer, L.M., 2001. Negative regulation of bcl-2 expression by p53 in hematopoietic cells. *Oncogene* 20: 240–251.
- Ysrafil, Y., Astuti, I., Anwar, S.L., Martien, R., Sumadi, F.A.N., Haryana, S.F., 2020. MicroRNA-155-5p diminishes in vitro ovarian cancer cell viability by targeting HIF1 α expression. *Adv Pharm Bull.* 10 (4). 630-637.
- Yu, S., Kim, T., Yoo, K.H., Kang, K., 2017. The T47D cell line is ideal experimental model to elucidate the progesterone-specific effects of a luminal A subtype of breast cancer. *Bio.chem and biopsy resc.* 1-7.
- Zhao, H., Wang, J., To, T.S., 2015. The phosphatidylinositol 3-kinase/Akt and c-Jun N-terminal kinase signaling in cancer: Alliance or contradiction? (Review). *Int.J.Onc.* 47: 429-436.