

DAFTAR PUSTAKA

- Aam, B.B., B. Heggset, E., Line Norberg, A., Sørlie, M., dan M. Vårum, K., 2010. Production of Chitooligosaccharides and Their Potential Applications in Medicine. *Marine Drugs*, **8**: 1482–1517.
- Aji, C. dan Dasari, D., 2009. Desain Faktorial Fraksional 2k-p Serta Analisisnya Berbasis Web. *Seminar Nasional Pendidikan Matematika FMIPA Universitas Pendidikan Indonesia*, .
- Balzar, M., Winter, M.J., de Boer, C.J., dan Litvinov, S.V., 1999. The biology of the 17-1A antigen (Ep-CAM). *Journal of Molecular Medicine (Berlin, Germany)*, **77**: 699–712.
- Barbieri, L., Battelli, M.G., dan Stirpe, F., 1993. Ribosome Inactivating Proteins from plants. *Biochim. Biophys. Acta*, **115**, 237–2824.
- Barbieri, L., Polito, L., Bolognesi, A., Ciani, M., Pelosi, E., Farini, V., dkk., 2006. Ribosome-inactivating proteins in edible plants and purification and characterization of a new ribosome-inactivating protein from Cucurbita moschata. *Biochimica Et Biophysica Acta*, **1760**: 783–792.
- Blagodatskikh, I.V. dan Bezrodnykh, E.A., 2013. Short chain chitosan solutions self-assembly and aggregates disruption effects. *Journal of Polymer Research*, **20**: .
- Burdall, S.E., Handby, A.M., Landsdown, M.R., dan Valerie, S., 2003. Review Breast cancer cell lines: friend or foe? *BioMed Central Ltd*, **5**: 89–95.
- CCRC, 2010. Prosedur tetap: Uji sitotoksik metode MTT.
- Couvreur, P., Barratt, G., Fattal, E., dan Vauthier, C., 2002. Nanocapsule Technology: A Review. *Critical Reviews™ in Therapeutic Drug Carrier Systems*, **19**: .
- Dhar, S., Kolishetti, N., Lippard, S.J., dan Farokhzad, O.C., 2011. Targeted delivery of a cisplatin prodrug for safer and more effective prostate cancer therapy in vivo. *Proceedings of the National Academy of Sciences*, **108**: 1850–1855.
- Feranisa, A., 2014. 'Formulasi dan sitotoksitas nanopartikel pektin penaut silang kitosan rantai sedang terintegrasi Ribosome-inactivating protein Mirabilis jalapa L. (protein MJ) dengan penanda anti EPCAM'. Universitas Gadjah Mada, Jogjakarta.



UNIVERSITAS
GADJAH MADA

FORMULASI DAN UJI SITOTOKSIK NANOPARTIKEL RIBOSOME INACTIVATING PROTEIN *Mirabilis jalapa*L (RIP MJ-C) MENGGUNAKAN KITOSAN RANTAI PENDEK DAN PEKTIN METILASI RENDAH TERKONJUGASI ANTI EpCAM TERHADAP SEL KANKER PAYUDARA T47D
MONICA KRISTIANI, Prof.Dr. Sismindari, SU.,Apt; Dr.Ronny Martien, M.Si
Universitas Gadjah Mada, 2015 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Fudholi, A. dan Hadisoewignyo, L., 2013. *Sediaan Solida*. Pustaka Pelajar, Yogyakarta.

Gires, O. dan Bauerle, P.A., 2010. EpCAM As a Target in Cancer Therapy. *Journal of Clinical Oncology*, **28**: e239–e240.

Guichard, E. dan Issanchou, S., 2006. Pectin Concentration, Molecular Weight and Degree of Esterification: Influence on Volatile Composition and Sensory Characteristics of Strawberry Jam. *Journal of Food Science*, **56**: 1621 – 1627.

Gupta, R.B. dan Kompella, U.B. (Eds.), 2006. *Nanoparticle Technology for Drug Delivery*, 1 edition. ed. CRC Press, New York.

Harianingsih, 2010. 'Pemanfaatan Limbah Cangkang Kepiting Menjadi Kitosan Sebagai Bahan Pelapis (Coater) Pada Buah Stroberi'. Universitas Diponegoro, Semarang.

Hariyati, M., 2006. 'Ekstraksi dan karakterisasi pektin dari limbah proses pengolahan jeruk Pontianak'. Fakultas Teknologi pertanian, Institut Pertanian Bogor, Bogor.

Hermanson, G.T., 2007. *Targetable Biodegradable Nanoparticles for Delivery of Chemotherapeutic and Imaging Agents to Ovarian Cancer*. ProQuest.

Ikawati, Z., Sudjadi, (first), dan Sismindari, 2006. Cytotoxicity Against Tumor Cell Lines Of A Ribosome- Inactivating Protein (Rip)-Like Protein Isolated From Leaves Of *Mirabilis jalapa* L. *Malaysian Journal of Pharmaceutical Sciences*, **Vol. 4**: 31–41.

Ikawati, Z., Sudjadi, Widyaningsih, E., dan Puspitasari, D., 2003. Induction of Apoptosis by Protein Fraction Isolated From The Leaves of *Mirabilis Jalapa* L on Hela and Raji cell-line. *Oriental Pharmacy and Experimental Medicine*, **3**: 151–156.

Irianto, S., Sutarno, dan Setyawan, A.D., 2007. Keanekaragaman *Mirabilis jalapa* L. Berdasarkan Pola Pita Isozim Peroksidase. *Bioteknologi*, **4**: 1–5.

Jonsson, D., 2010. 'Development and characterisation of chitosan-plasmid DNA nanoparticles'. University of Technology, Tampere, Finland.



UNIVERSITAS
GADJAH MADA

FORMULASI DAN UJI SITOTOKSIK NANOPARTIKEL RIBOSOME INACTIVATING PROTEIN Mirabilis jalapa.L (RIP MJ-C) MENGGUNAKAN KITOSAN RANTAI PENDEK DAN PEKTIN METILASI RENDAH TERKONJUGASI ANTI EpCAM TERHADAP SEL KANKER PAYUDARA T47D
MONICA KRISTIANI, Prof.Dr. Sismindari, SU.,Apt; Dr.Ronny Martien, M.Si
Universitas Gadjah Mada, 2015 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Kawashima, Y., Yamamoto, H., Takeuchi, H., dan Kuno, Y., 2000. *Mucoadhesive DL-Lactide/Glycolide Copolymer Nanospheres Coated with Chitosan to Improve Oral Delivery of Elcatonin - Pharmaceutical Development and Technology - Volume 5, Issue 1*, 1st ed. Pharmaceutical Development and Technology.

Kodama, T., Doukas, A., dan Hamblin, M., 2003. Delivery of Ribosome Inactivating Protein Toxin Into Cancer cells with shock waves. *Cancer letters*, **189**: 69–75.

Kurniawan, D. dan Sulaiman, T., 2009. *Teknologi Sediaan Farmasi*. Graha Ilmu, Yogyakarta.

Lankalapalli, S. dan Kollapali, V., 2009. Polyelectrolyte Complexes: A Review of their Applicability in Drug Delivery Technology. *Indian Journal of Pharmaceutical Sciences*, **71**: 481–487.

Li, F., Wen, X., Zhou, S., Tong, X., Su, P., Li, H., dkk., 2009. Anti-tumor activity of paclitaxel-loaded chitosan nanoparticles: An in vitro study. *Elsevier*, .

Ling, J., Liu, W.Y., dan Wang, T.P., 1994. Cleavage of supercoiled double-stranded DNA by several ribosome-inactivating proteins in vitro. *FEBS letters*, **345**: 143–146.

Litvinov, S.V., Balzar, M., Winter, M.J., Bakker, H.A., Briaire-de Bruijn, I.H., Prins, F., dkk., 1997. Epithelial cell adhesion molecule (Ep-CAM) modulates cell-cell interactions mediated by classic cadherins. *The Journal of Cell Biology*, **139**: 1337–1348.

Martindale, 1982. *The Axtra Pharmacopeia*. The Pharmaceutical Press.

Min, K., Jo, H., Song, K., Cho, M., Chun, Y., Jon, S., dkk., 2011. Dual-aptamer-based delivery vehicle of doxorubicin to both PSMA (+) and PSMA (-) prostate cancers | DeepDyve. *Elsevier*, **32**: 2124–2132.

Mosmann, T., 1983. Rapid colorimetric assay for cellular growth and survival: application to proliferation and cytotoxicity assays. *Journal of Immunological Method*, **16;65**: 55–63.

Mufyda, S.N., 2015. 'PENGARUH pH TERHADAP REAKSI BIOKONJUGASI PEKTIN DENGAN BSA MENGGUNAKAN KATALIS EDAC'. Universitas Gadjah Mada, Yogyakarta.



UNIVERSITAS
GADJAH MADA

FORMULASI DAN UJI SITOTOKSIK NANOPARTIKEL RIBOSOME INACTIVATING PROTEIN Mirabilis jalapa.L (RIP MJ-C) MENGGUNAKAN KITOSAN RANTAI PENDEK DAN PEKTIN METILASI RENDAH TERKONJUGASI ANTI EpCAM TERHADAP SEL KANKER PAYUDARA T47D
MONICA KRISTIANI, Prof.Dr. Sismindari, SU.,Apt; Dr.Ronny Martien, M.Si
Universitas Gadjah Mada, 2015 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Muzzarelli, R. a. A. dan Muzzarelli, C., 2005. Chitosan Chemistry: Relevance to the Biomedical Sciences, dalam: Heinze, T. (Ed.), *Polysaccharides I*. Springer Berlin Heidelberg, hal. 151–209.

Narayanan, S., surendranath, K., Bora, N., Surolia, A., dan Karande, A., 2005. Ribosome inactivating proteins and apoptosis.

Nugrahani, A., 2013. 'Uji aktivitas antibakteri ekstrak protein daun Mirabilis jalapa L terhadap bakteri *Staphylococcus epidermidis* dan *Propionibacterium acnes*', *Thesis*, . Fakultas Farmasi Universitas Gadjah Mada, Jogjakarta.

Offiah, G. dan Hopkins, K.B. and A.M., 2011. Junctional Adhesion Molecules (JAMs) - New Players in Breast Cancer?

Osta, W., chen, Y., Mikhitarian, K., Mitas, M., Salem, M., dan Hannun, Y., 2004. EpCAM Is Overexpressed in Breast Cancer and Is a Potential Target for Breast Cancer Gene Therapy. *American Association for Cancer Research*, .

Ozalp, V.C., Eyidogan, F., dan Oktem, H.A., 2011. Aptamer-Gated Nanoparticles for Smart Drug Delivery. *Pharmaceuticals*, **4**: 1137–1157.

Pertiwi, D.V., 2014. 'Formulai Nanopartikel Ribosome Inactivating Protein Mirabilis jalapa (RIP MJ) Tertarget Menggunakan Kitosan Rantai Pendek-Pektin Terkonjugasi Antibodi Anti EpCAM Dan Uji Sitotoksik Pada Sel Kanker Payudara'. Universitas Gadjah Mada, Yogyakarta.

Peumans, W.J., Hao, Q., dan Van Damme, E.J., 2001. Ribosome-inactivating proteins from plants: more than RNA N-glycosidases? *FASEB journal: official publication of the Federation of American Societies for Experimental Biology*, **15**: 1493–1506.

Qi, L.-F., Xu, Z.-R., Li, Y., Jiang, X., dan Han, X.-Y., 2005. In vitro effects of chitosan nanoparticles on proliferation of human gastric carcinoma cell line MGC803 cells. *World Journal of Gastroenterology* : WJG, **11**: 5136.

Rawat, M., Singh, D., Saraf, S., dan Saraf, S., 2006. Nanocarriers: promising vehicle for bioactive drugs. *Biological & Pharmaceutical Bulletin*, **29**: 1790–1798.

Rodriguez, G., G, A., H, F., dan E, D., 2004. 'Physicochemical parameters associated with nanoparticle formation in the salting-out, emulsification-diffusion, and nanoprecipitation methods. - PubMed - NCBI'. URL: <http://www.ncbi.nlm.nih.gov/pubmed/15359578> (diakses tanggal 8/9/2015).



UNIVERSITAS
GADJAH MADA

FORMULASI DAN UJI SITOTOKSIK NANOPARTIKEL RIBOSOME INACTIVATING PROTEIN Mirabilis jalapa.L (RIP MJ-C) MENGGUNAKAN KITOSAN RANTAI PENDEK DAN PEKTIN METILASI RENDAH TERKONJUGASI ANTI EpCAM TERHADAP SEL KANKER PAYUDARA T47D
MONICA KRISTIANI, Prof.Dr. Sismindari, SU.,Apt; Dr.Ronny Martien, M.Si
Universitas Gadjah Mada, 2015 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Sahoo, S.K. dan Labhasetwar, V., 2003. Nanotech approaches to drug delivery and imaging. *Drug Discovery Today*, **8**: 1112–1120.

Sakkinen, M., 2003. 'Biopharmaceutical Evaluation of Microcrystalline Chitosan as Release-Rate-Controling'. Academic dissertation Faculty of Science of The University of Helsinki.

Schafer, J.M.G., Lee, E.S., O'Regan, R.M., Yao, K., dan Jordan, V.C., 2000. Rapid Development of Tamoxifen-stimulated Mutant p53 Breast Tumors (T47D) in AthymicMice1. *Clinical Cancer Research*, **6**: 4373–4380.

Schmidt, M., Scheulen, M.E., Dittrich, C., Obrist, P., Marschner, N., Dirix, L., dkk., 2010. An open-label, randomized phase II study of adecatumumab, a fully human anti-EpCAM antibody, as monotherapy in patients with metastatic breast cancer. *Annals of oncology: official journal of the European Society for Medical Oncology / ESMO*, **21**: 275–282.

Sharma, N., Park, S.-W., Vepachedu, R., Barbieri, L., Ciani, M., Stirpe, F., dkk., 2004. Isolation and Characterization of an RIP (Ribosome-Inactivating Protein)-Like Protein from Tobacco with Dual Enzymatic Activity. *Plant Physiology*, **134**: 171–181.

Siregar, M., 2009. 'Pengaruh Berat Molekul Kitosan Untuk Menurunkan Kadar Logam Besi'. Universitas Sumatra Utara, Medan, Sumatra Utara.

Sismindari dan Lord, J., 2000. RNA N-glicosidase Activity of Leave crude extract from Carica papaya, Morinda citrifolia and Mirabilis jalapa. *Indon.J.Biotech*, 342–345.

Sismindari, Sri Hartanti, M., Adhyatmika, dan Sudibyo, R.S., 2010. Cytotoxic Selectivity of MJC 0.3 and MJC 0.5 Acidic Ribosome-Inactivating Proteins Isolated from Mirabilis jalapa L Leaves Against Various Cancer Cell-Lines. *J Med Sci*, **42**: 39–43.

Sismindari, Sudjadi, dan Ikawati, Z., 2008. Uji aktivitas dan kloning MJ-C, Ribosome Inactivating Protein (RIP) asam dari Mirabilis jalapa L.

Sriamornsak, P., 2003. Chemistry of pectin and its pharmaceutical uses: A review. *Silpakorn University International Journal*, **3**: 206–228.



UNIVERSITAS
GADJAH MADA

FORMULASI DAN UJI SITOTOKSIK NANOPARTIKEL RIBOSOME INACTIVATING PROTEIN Mirabilis jalapa.L (RIP MJ-C) MENGGUNAKAN KITOSAN RANTAI PENDEK DAN PEKTIN METILASI RENDAH TERKONJUGASI ANTI EpCAM TERHADAP SEL KANKER PAYUDARA T47D
MONICA KRISTIANI, Prof.Dr. Sismindari, SU.,Apt; Dr.Ronny Martien, M.Si
Universitas Gadjah Mada, 2015 | Diunduh dari <http://etd.repository.ugm.ac.id/>

- Sterzynska, K., Kempisty, B., Zawierucha, P., dan Zabel, M., 2012. Analysis of the specificity and selectivity of anti-EpCAM antibodies in breast cancer cell lines. *Folia Histochemica Et Cytobiologica / Polish Academy of Sciences, Polish Histochemical and Cytochemical Society*, **50**: 534–541.
- Strohlein, M.A., Lordick, F., Rüttinger, D., Grützner, K.-U., Schemanski, O.C., Jäger, M., dkk., 2011. Immunotherapy of peritoneal carcinomatosis with the antibody catumaxomab in colon, gastric, or pancreatic cancer: an open-label, multicenter, phase I/II trial. *Onkologie*, **34**: 101–108.
- Sudjadi, Sismindari, Herawati T, dan A, P., 2003. Pemurnian Ribosome Inactivating Protein (RIP) dari daun Mirabilis Jalapa L. dengan kolom CM-Sepharose CL-6B DAN sephacryl S-300HR. *Majalah Farmasi Indonesia*, **2**: 316–321.
- Sudjadi, Witasari, L.D., Sadarum, M.T., Nastity, N., dan Sismindari, 2007. Efek sitotoksik suatu protein seperti Ribosome Inactivating Proteins yang bersifat asam dari daun Mirabilis jalapa L. pada sel kanker. *Majalah Farmasi Indonesia*, **1**: 8–14.
- Tiyaabonchai, W., 2003. Chitosan nanoparticles :A promising system for drug delivery **Naresuan University Journal**: 51–66.
- Vivanko, J.M., 1999. 'Antiviral and Antiviroid Activity of MAP-Containing Extracts from Mirabilis jalapa Roots'. URL: http://www.apsnet.org/publications/plantdisease/1999/December/Pages/83_12_1116.aspx (diakses tanggal 30/8/2015).
- Wicaksono, P.A., 2014. 'Formulasi dan sitotoksitas nanopartikel Ribosome Inactivating Protein Mirabilis jalapa L dengan alginat-kitosan viskositas rendah terkonjugasi antibodi anti EpCAM terhadap sel T47D'. Universitas Gadjah Mada, Yogyakarta.
- Wilson, B., Samanta, M., Santhi, K., dan Kumar, S., 2010. Chitosan nanoparticles as a new delivery system for the anti-Alzheimer drug tacrine.
- Winarno, F., 1997. *Kimia Pangan Dan Gizi*. PT. Gramedia Pustaka Utama, Jakarta.
- Wu, Y., Yang, W., Wang, C., Hu, J., dan Fu, S., 2005. Chitosan nanoparticles as a novel delivery system for ammonium glycyrrhizinate. *Elsevier*, **295**: 235–245.
- Xu, H. dan Liu, W.Y., 2004. Cinamomin-a Versatile Type Ribosome Inactivating Protein. *Acta Biochim. Biophys. Sinica*, **36** (3), 169–176.



UNIVERSITAS
GADJAH MADA

FORMULASI DAN UJI SITOTOKSIK NANOPARTIKEL RIBOSOME INACTIVATING PROTEIN Mirabilis jalapa.L (RIP MJ-C) MENGGUNAKAN KITOSAN RANTAI PENDEK DAN PEKTIN METILASI RENDAH TERKONJUGASI ANTI EpcAM
TERHADAP SEL KANKER PAYUDARA T47D
MONICA KRISTIANI, Prof.Dr. Sismindari, SU.,Apt; Dr.Ronny Martien, M.Si
Universitas Gadjah Mada, 2015 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Yuwono, T., 2005. *Biologi Molekular*. Penerbit Erlangga.

Zablockis, E., Huang, J., Müller, B., Darvill, A.G., dan Albersheim, P., 1995. Characterization of the cell-wall polysaccharides of *Arabidopsis thaliana* leaves. *Plant Physiology*, **107**: 1129–1138.

Zampieri, L., Bianchi, P., Ruff, P., dan Arbuthnot, P., 2002. Differential modulation by estradiol of P-glycoprotein drug resistance protein expression in cultured MCF7 and T47D breast cancer cells. *Anticancer Research*, **22**: 2253–2259.