

**DAFTAR PUSTAKA**

- Alzheimer's Association. 2018. *Alzheimer's Disease Facts and Figures*. U.S.: Alzheimers Dement. pp.367-429.
- Azwanida. 2015. A Review on the Extraction Methods Use in Medicinal Plants, Principle, Strength and Limitation. *Medicinal & Aromatic Plants*, 04(03), pp. 3–8.
- Baransano, H. K. dan Mangimbulude, J. C. 2011. Eksploitasi dan Konservasi Sumberdaya Hayati Laut dan Pesisir di Indonesia, *Jurnal Biologi Papua*, 3(1), pp. 39–45.
- Beedessee, G. Avin R., Rashmee S.B., Rob W.M., dan Daniel E.P.M.,2013. Acetylcholinesterase-Inhibitory Activities of The Extracts from Sponges Collected in Mauritius Waters. *Chemistry and Biodiversity*, 10(3), pp. 442–451.
- Bhakuni, D. S., and Rawat, D. S., 2005. *Bioactive Marine Natural Products*. Lucknow: India, pp. 64-79
- Bird T.D., Miller B.L., Kasper L.D., Braunwald E., Fauci A.S., Hauser, S.L, Longo D.L., Jameson L., dan Isselbacher K.J., 2005. *Harrison's Principles of Internal Medicine 16 ed*. New York: MCGraw Hill.
- Bonnard, I., Sabbani B.J.L., Nataly B., Bernard B., dan Maurice A., 2010. New Lobane and Cembrane Diterpenes from Two Comorian Soft Corals. *Marine Drugs*, 8(2), pp. 359–372.
- Brahmachari, G.2011. Natural Products in the Drug Discovery Programmes in Alzheimer's : Impacts and Prospects. *Asia-Pacific Biotech News*, 15, p. 14.
- Castellanos, F., Edisson T., Freddy A.R., Adriana U., Mónica P., Jackson A. L. C., dan Leonardo C., 2018. Screening of Acetylcholinesterase Inhibitors in Marine Organisms from The Caribbean Sea. *Natural*

- Product Research.** Taylor & Francis, 6419, pp. 1–8.
- Colovic, M. B., Danijela Z.K., Tamara D.L.P., Aleksandra M.B., dan Vesna M.V., 2013. Acetylcholinesterase Inhibitors: Pharmacology and Toxicology, *Current Neuropharmacology*, 11(3), pp. 315–335.
- De Laubenfels. 1954. World Porifera Data Base. Diakses dari [www.marine-species.org/porifera/porifera.php?p=taxdetails &id=166784](http://www.marine-species.org/porifera/porifera.php?p=taxdetails&id=166784), pada tanggal 21 November 2018.
- Departemen Kesehatan Republik Indonesia. 2014. *Farmakope Indonesia V*. Jakarta: Direktorat Jendral Pengawasan Obat dan Makanan.
- Díaz, A. N., F. Garcia S., V. Bracho J.L., A. Aguilar. 1997. Enzymatic Determination of Fenitrothion by Cholinesterase and Acetylcholinesterase on Fluorogenic Substrates. *Journal of Analytical Chemistry*, 357(7), pp. 958–961.
- DiPiro, Joseph T., Cecily V. DiPiro, Barbara G. W., dan Terry L. S., 2008. *Pharmacotherapy Handbook 7 ed*. New York: McGraw-Hill Education.
- DiPiro, Joseph T., Cecily V. DiPiro, Barbara G. W., dan Terry L. S., 2015. *Pharmacotherapy Handbook 9 ed*. New York: McGraw-Hill Education.
- Duthey, B. 2013. *WHO Background Paper 6.11: Alzheimer Disease and other Dementias*, p. 6.11-1-6.11-74.
- Ellman, G. L., K. Diane C., Valentino A., Jr dan Robert M.F. 1961. A new and Rapid Colorimetric Determination of Acetylcholinesterase Activity. *Biochemical Pharmacology*, 7(2), pp. 88–95.
- Farlow, M. R., Stephen S, Pierre N.T., Jane Y., Margaret L.M., Qin W., Elimor B.S, Heng Z., Timothy H., dan Andrey S., 2010. Effectiveness and Tolerability of High-dose (23 mg/d) versus Standard-Dose (10 mg/d) Donepezil in Moderate to Severe

- Alzheimer's Disease: A 24-week, randomized, double-blind study. *Clinical Therapeutics*. Excerpta Medica Inc., 32(7), pp. 1234–1251.
- Farrokhnia, M. dan Nabipour, I. 2014. Marine Natural Products as Acetylcholinesterase Inhibitor: Comparative Quantum Mechanics and Molecular Docking Study. *Current Computer Aided-Drug Design*, 10(1), pp. 83–95.
- FlickerL. 1999. Dementia Reconsidered: The Person Comes First. *British Medical Journal*, pp. 615-616.
- Gandjar, I.G. dan Rohman A. 2010. *Kimia Farmasi Analisis*. Yogyakarta: Pustaka belajar.
- Giacobini, E. dan Becker, R. E. 2007. One Hundred Years After The Discovery of Alzheimer's Disease. A Turning Point for Therapy?. *Journal of Alzheimer's Disease*, 12(1), pp. 37–52.
- Giovanni, D.S., Aline B., Aurelie U., Andrew M., Kurt H., Pierre A.C., dan Marianne R. 2008. In vitro Screening Assays to Identify Natural or Synthetic Acetylcholinesterase Inhibitors: Thin Layer Chromatography versus Microplate Methods. *European Journal of Pharmaceutical Sciences*. 33: 109-119.
- Hadi, T. A., Hadiyanto., Agus B., Niu W., dan Suharsono. 2016. The Morphological and Species Diversity of Sponges on Coral Reef Ecosystems in the Lembeh Strait, Bitung. *Marine Research in Indonesia*, 40(2), pp. 65–77.
- Handayani, D., Maipa, D., Marlina., and Meilan. 2010. *Skrining Aktivitas Antibakteri Beberapa Biota Laut dari Perairan Pantai Painan, Sumatera Barat*. Working Paper. Sumatera: Universitas Andalas.
- Handayani, N., Idam A., Siti N.K., Freddy H., Warsito P dan Taruno. 2015. Review: Perkembangan Teknologi Neuroimaging sebagai Modalitas Deteksi Dini Penyakit Alzheimer. *Prosiding Snips*. pp.

645-648.

- Hariyadi, P., 2013. Freeze Drying Technology: for Better Quality & Flavor of Dried Product. *Food Review Indonesia*, Vol. 8, No. 2, pp. 53.
- Hermawan S. D., Yani L., dan Undang A. D., 2016. Identifikasi Senyawa Flavonoid Pada Ekstrak dan Fraksi yang Berasal dari Buah Berunuk (*Crescentia cujete* L.). *Prosiding Farmasi*, Vo. 2, No. 2, pp.6-7.
- Hassan, W. 2004. *Isolation and Structure Elucidation of Bioactive Secondary Metabolites from Marine Sponge*. Zagazig: University of Zagazig, pp. 1-24.
- Hostettmann K., A. Borloz., A. Urbain., dan A.Marston. 2006. Natural Product Inhibitors of Acetylcholinesterase. *Current Organic Chemistry*, 10(8), pp. 825–847.
- Hostettmann, K. 2014. *Handbook of Chemical and Biological Plant Analytical Methods First Edition*. United Kingdom: John Wiley & Sons Ltd.
- Houghton, P. J. dan Raman, A. 1998. *Laboratory Handbook for The Fractionation of Natural Extracts*.
- Houghton, J.P., Yuhao R., dan Melanie J.H. 2006. Acetylcholinesterase Inhibitors From Plants and Fungi. *The Royal Society of Chemistry Journal*: U.K Cambridge University, pp. 181-198.
- Hu, Y., Jiauhui C., Guping H., Jianchen Y., Xun Z., Yongcheng L., Shengping C., dan Jie Y. 2015. Statistical Research On The Bioactivity of New Marine Natural Products Discovered During The 28 Years from 1985 to 2012. *Marine Drugs*, 13(1), pp. 202–221.
- Ingkaninan, K., C.M. de best., R. van der H., A.J.P. Hofte., B. Karabatak., H. Irth., U.R. Tjaden., J. van D.G dan R. Verpoorte. 2000. High Performance Liquid Chromatography with On Line Coupled UV, Mass Spectrometric and Biochemical Detection for Identification of

- Acetylcholinesterase Inhibitors from Natural Products. *Journal of Chromatography A*, 872(1–2), pp. 61–73.
- Kato, H., Tatsuo N., Koichi M., Tetsuro K., Yoshihiro K., Hiroshi M., Fitje L., Remy E.P.M., Nicole J., Hideyoshi Y., dan Sachiko T., 2015. Niphateolide A: Isolation from The Marine Sponge *Niphates olemda* and Determination of it's Absolute Configuration by an ECD Analysis. *Tetrahedron*. Elsevier Ltd, 71(38), pp. 6956–6960.
- Keli, F. J., 2007. Modeling of Process Intensification. Ultrasonik Vs Microwave Extraction Intensification of Active Principles From Medicinal Plants. *AIDIC Conferene Series*, Vol. 9, pp. 1-8.
- Kemenkes Kesehatan Republik Indonesia. 2016. Menkes: Lansia yang Sehat, Lansia yang Jauh dari Demensia. Diakses dari [www.depkes.go.id/article/print/16031000003/menkes-lansia-yang-sehat-lansia-yang-jauh-dari-demensia.html](http://www.depkes.go.id/article/print/16031000003/menkes-lansia-yang-sehat-lansia-yang-jauh-dari-demensia.html), pada tanggal 28 Desember 2018.
- Kobayashi, J., Chun-min Z., Masami I., Hideyuki S., Takuma S., dan Yuzuru M., 1992. Niphatesines E-H, New Pyridine Alkaloids from the Okinawan Marine Sponge *Niphates* sp. *Journal of The Chemical Society, Perkin Trans*, pp. 1291-1294.
- Langjae, R., Somchai B., Supreeya Y., Kornkanok I dan Anuchit P. 2007. Acetylcholinesterase-Inhibiting Steroidal Alkaloid from the Sponge *Corticium* sp. *Steroids*, 72(9–10), pp. 682–685.
- Lleó, A., Greenberg, S. M. dan Growdon, J. H. 2006. Current Pharmacotherapy for Alzheimer's Disease. *Annual Review of Medicine*, 57(1), pp. 513–533.
- Marston, A., Kissling, J. dan Hostettmann, K. 2002. A Rapid TLC Bioautographic Method for The Detection of Acetylcholinesterase and Butyrylcholinesterase Inhibitors in Plants. *Phytochemical*

- Analysis*, 13(1), pp. 51–54.
- Marzuki, I. 2018. *Eksplorasi Spons Indonesia : Seputar Kepulauan Spermonde*. Makassar: Nas Media Pustaka.
- Maurya, A., Komal K., Subash C.V., Ravinder R. dan Anupam S. 2018. Vacuum Liquid Chromatography: Simple, Efficient, and Versatile Separation Technique for Natural Products. *Organic and Medicinal Chemistry International Journal*. ISSN 2474-7610, pp. 1-3.
- Mayeux, R. dan Stern, Y. 2012. *Genetic Epidemiology of Alzheimer Disease*, 20(0893–0341), pp. S58–S62.
- Moodie, W. K. L., Kristina S., Tom T., Robert F., dan Johan S. 2019. Natural Cholinesterase Inhibitors From Marine Organisms. *Natural Product Reports*, pp 1-34.
- Motuhi, S. E., Mohamed M., Claude E.P., Stephaen L.B., dan Stephane B., 2016. Marine Natural Products from New Caledonia-A Review. *Marine Drugs*, 14(3).
- Muchtaridi., Arry Y., Sandra M dan Hari P. 2018. *Kimia Medisinal: Dasar-Dasar dalam Perancangan Obat*. Jakarta: Prenada media Group, hal. 205.
- Mukhriani., 2014. Ekstraksi, Pemisahan Senyawa, dan Identifikasi Senyawa Aktif. *Jurnal Kesehatan*. Vol. VII, No. 2.
- Nakao, Y., Jacqueline K., Wesley Y.Y., Michelle K., dan Paul J.S., 2003. More Kapakahines from The Marine Sponge *Cribrochalina olemda*. *Organic Letters*, 5(9), pp. 1387–1390.
- Nofiani, R., Siti, N., and Anjuk, S., 2009. Aktivitas Antimikroba Ekstrak Metanol Bakteri Berasosiasi Spons dari Pulau Lemukutan, Kalimantan Barat. *Jurnal Ilmu dan Teknologi Kelautan Tropis*, Vol. 1, No. 2, Hal. 33-4.
- Onor, M. L., Trevisiol, M. dan Aguglia, E. 2007. Rivastigmine in the

- treatment of Alzheimer's disease. *Clinical interventions in aging*, 2(1), pp. 17–32.
- Orhan, I. 2013. Nature: A Substantial Source of Auspicious Substances with Acetylcholinesterase Inhibitory Action, *Current Neuropharmacology*, 11(4), pp. 379–387.
- Panawala, L. 2017. *Difference Between Hormones and Neurotransmitters: Pediaa*.
- Parsons, C. G., Wojciech D., Andrzej D., dan Irena P., 2013. Memantine and Cholinesterase Inhibitors: Complementary Mechanisms in The Treatment of Alzheimer's disease. *Neurotoxicity Research*, 24(3), pp. 358–369.
- Patrick G.L. 2005. *An Introduction to Medicinal Chemistry 3ed*. New York: Oxford University Press
- Patrick G.L. 2017. *An Introduction to Medicinal Chemistry 6ed*. New York: Oxford University Press
- Perdicaris, S., Vlachogianni, T. dan Valavanidis, A. 2013. Bioactive Natural Substances from Marine Sponges: New Developments and Prospects for Future Pharmaceuticals. *Natural Products Chemistry & Research*, 01(03), pp. 1–8.
- Petrella, J. R., Coleman, R. E. dan Doraiswamy, P. M. 2003. State of the Art Radiology Neuroimaging and Early Diagnosis of Alzheimer Disease : A Look to the Future 1. *Radiology*, 226(2), pp. 315–336.
- Prince, M., Daners W., Maeleenn G., Gemma C.A., Yu T.W., Matthew P., 2015. World Alzheimer Report 2015 The Global Impact of Dementia An Analysis of Prevalence, Incidence, Cost and Trends, *Alzheimer's Disease International*.
- Rhee, I. K., Natalie A., Teus L., Hubertus I dan Robert V. 2003. *Activity in Plant Extracts Using a Fluorimetric Flow Assay*, pp. 145–149.

- Rohman, A. 2018. *Validasi Penjaminan Mutu Metode Analisa Kimia*. Yogyakarta: UGM Press.
- Rubiyanto, D. 2107. *Metode Kromatografi : Prinsip Dasar, Praktikum & Pendekatan Kromatografi*. Yogyakarta: Deepublish. hal 105-106.
- Saifudin, A. 2014. *Senyawa Alam Metabolit Sekunder*. Yogyakarta: Deepublish. hal 48-49
- Santhanam, R., Ramesh S., dan Anbu J.S. 2018. *Biology and Ecology of Pharmaceutical Marine Sponges*. Taylor & Francis: CRC Press.
- Sarker, D.S., Zahid L, dan Alexander I.G. 2006. *Natural Product Isolation Second Edition*. Totowa, New Jersey: Humana Press Inc.
- Scarpini, E., Scheltens, P. dan Feldman, H. 2003. *Review Treatment of Alzheimer 's Disease : Current Status and New Perspectives*, pp. 539–547.
- Setyaningsih, I., Suptijah, P., and Kustiaryah. 2007. Aktivitas Antibakteri dan Komponen Asam Lemak dari Ekstrak *Skeletonema costatum*. *Seminar Nasional Tahunan IV hasil Penelitian Perikanan dan Kelautan*.
- Shah, B dan A.K. Sheth. 2010. *Textbook of Pharmacognosy and Pytochemistry*. New Delhi: Elsevier Inc.
- Siegel, A., dan Hreday N. Sapru. 2010. *Essential Neuroscience Second Edition*. USA: Lippincott Williams & Wilkins, pp.108.
- Solihin, A. dan Batungbacal, Ephraim Nasution, A. M. 2013. *Laut Indonesia dalam Krisis*, Vol. 12, p. Hal. 1-12.
- Suciati, Widyawaruyanti, A., Wahyuni T.S., dan Ingkaninan, K. 2018. Utilization of Indonesian Marine Biodiversity as Anticholinesterase and Antiandrogenic Agents. *International Research Collaboration and Scientific Publication*. Universitas Airlangga.
- Tayeb, H. O., Hyun D.Y., Bruce H.P., Frank I.T., 2012. Pharmacotherapies



- for Alzheimer's disease: Beyond Cholinesterase inhibitors. *Pharmacology and Therapeutics*. Elsevier Inc., 134(1), pp. 8–25.
- Thomas, S.K., George, R.E., Kunjumon, M., Thankamani, V.I. 2016. Phytochemical Screening and TLC Profile of Fruits and Flowers of *Alstonia venenata* R.Br. *International Journal of Pharmaceutical Sciences and Drug Research* 8(2) : 117-120.
- Wilkinson D dan Shefram M., 2001. Use of Acetylcholinesterase Inhibitors in Alzheimer's Disease. *Expert Review of Neurotherapeutics*, p. 62.
- Winblad, B., Lena K., Sture E., Lennart M., Stellan B., Anna-L.W., Catarina J.B., dan Anders H., 2006. Donepezil in patients with severe Alzheimer's disease: double-blind, parallel-group, placebo-controlled study. *Lancet*, 367(9516), pp. 1057–1065.
- Winblad, B., G Grossberg., L Frolich., M. Farlow., S. Zechner., J. Nagel dan R. Lane., 2007. IDEAL: A 6-month, Double-Blind, Placebo-Controlled Study of the First Skin Patch for Alzheimer Disease. *Neurology*, pp. 514-522.
- Xu, R., Yang Ye dan Weimin Z. 2010. *Introduction to Natural Products Chemistry*. Beijing: Science Press, pp. 15.
- Yoo Y. Ki., dan Park So-Young. 2012. Terpenoids as Potential Anti-Alzheimer's Disease Therapeutics. *Molecules*, ISSN 1420-3049, pp. 3524-3532.