

DAFTAR PUSTAKA

- Abidin, Z. 1990. *Dasar-dasar Pengetahuan tentang Zat Pengatur Tumbuh*. Bandung: Penerbit Angkasa.
- Ahn, J.W., C.O. Lee., E.J. Kim., O.P. Zee & H.J. Kim. 1992. Piperoctadecalidine, a new piperidine alkaloid from *Piper retrofractum* fruits. *Bull. Korean Chem. Soc* 13(4): 388- 391.
- Akoyi, J., A. Mgtutu., J. Machuka & M.V. Lijsebettens. 2013. Dicamba Growth Regulator Promotes Genotype Independent Somatic Embryogenesis from Immature Zygotic Embryos of Tropical Maize Inbred Lines. *Journal of Life Science* 7(7): 677-689.
- Andaryani, S. 2010. Kajian Penggunaan Berbagai Konsentrasi BAP dan 2,4-D terhadap Induksi Kalus Jarak Pagar (*Jatropha curcas* L.) secara In Vitro. Skripsi, Universitas Sebelas Maret.
- Andrews, J. 2003. BSAC Disc Diffusion Method for Antimicrobial Susceptibility Testing. [Online] Available at https://www.google.com/url?sa=t&source=web&rct=j&url=http://bsac.org.uk/wp-content/uploads/2012/02/version215-nov-2003-.pdf&ved=2ahUKEwiAs_izl_zoAhXK8HMBHQ3BD5EQFjARegQICBAB&usg=AOvVaw06ynMbj_cwQ1hmOi5o6ERk . Accessed 22nd April, 2020.
- Anonim, 2018. Zone of Inhibition Test for Antimicrobial Activity. *Microchem Laboratory*. [Online] Availabla at <https://microchemlab.com/test/zone-inhibition-test-antimicrobial-activity> . Accessed 22nd April, 2020.
- Baksha, R., Mavlanov, G.T., Nasirova, G.B. & Djataev, S.A. 2006. Gossypol Accumulation and Morphogenesis in Cotton (*G. hirsutum* L.) Callus Cultures. *J. Biol. Sci.* 6:1126-1129.
- Balouiri, M., M. Sadiki & S. K. Ibsouda. 2016. Methods for in vitro evaluating antimicrobial activity: A Review. *Journal of Pharmaceutical Analysis* 6: 71-79.
- Bele, A. A. & A. Khale. 2011. An Overview of Thin Layer Chromatography. *IJPSR* 6: 256-267. DOI: [http://dx.doi.org/10.13040/IJPSR.0975-8232.2\(2\).256-67](http://dx.doi.org/10.13040/IJPSR.0975-8232.2(2).256-67).
- Blount, Z.D. 2015. The Natural History of Model Organism. The Unexhausted Potential of *E. coli*. *eLIFE Feature Article*: 1-12. DOI: 10.7554/elife.05826.
- Brenner D.J. & Farmer J.J III. 2007. Family I. Enterobacteriaceae Rhn 1937, Nom. Fam. Cons. Opin. 15, Jud. Comm. 1958a, 73, Ewing, Farmer, and Brenner 1980, 674; Judicial Commission 1981, 104. In: Garrity G, Brenner DJ, Krieg NR, Staley JR. *Bergey's Manual of Systematic Bacteriology*, Volume 2. The Proteobacteria, Part B: The Gammaproteobacteria. New York: Springer. p. 587–850.
- Bruslind, L. 2019. *General Microbiology 1st edition*. Oregon: Oregon State University.
- Cardoso, M.A. & De Oliveira, D.E. 1996. Tissue Culture of *Hypericum Brasiliense* Choisy: Shoot Multiplication and Callus Induction. *Plant Cell Tiss. Org. Cult* 44:91-94.

- Chang, D.E., D.J. Smalley., D.L. Tucker., M.P. Leatham., W.E. Norris., S.J. Stevenson., A.B. Anderson., J.E. Grissom., D.C. Laux., P.S. Cohen & T. Conway. 2004. Carbon Nutrition of *Escherichia coli* in the Mouse Intestine. *PNAS* 101(19): 7427-7432.
- Chaudhary, G. & Dantu P. K. 2015. Evaluation of Callus Browning and Develop a Strategically Callus Culturing of *Boerhaavia diffusa* L. *Journal of Plant Development* 22: 47-58.
- CLSI, Performance Standars for Antimicrobial Disc Susceptibility Tests, Approved Standard, 7th ed, CLSI document M02-A11. Clinical and Laboratory Standards Institute, 950 West Valley Road, Suite 2500, Wayne, Pennsylvania 19087, USA, 2021.
- Dalila, Z. D., H. Jaafar & A. A. Manaf. 2013. Effects of 2,4-D and Kinetin on Callus Induction of *Barringtonia racemose* Leaf and Endosperm Explants in Different Types of Basal Medium. *Asian Journal of Plant Sciences* 12(1), pp. 21-27.
- Defale, N.A., U.P. Semwal., P.K. Agarwal., P. Sharma & G.N. Singh. 2012. Quantification of ceftriaxone sodium in pharmaceutical preparations by a new validated microbiological bioassay. *Analytical Methods* (8): 1-9.
- Desriatin, N. L. 2010. *Pengaruh Kombinasi Zat Pengatur Tumbuh IAA dan Kinetin terhadap Morfogenesis pada Kultur In Vitro Tanaman Tembakau (Nicotiana tabacum* L. var. Prancak-95). Institut Teknologi Sepuluh November, Surabaya.
- Deventhiran M., John Wyson W., Sheik Noor Mohamed M., Jaikumar K., Saravanan P., & Anand. 2017. In vitro Propagation and Comparative Phytochemical Analysis of Wild Plant and Micropropagated *Cleome rutidosperma* DC. *International Journal of Pharmacognosy and Phytochemical Research* 9(2): 253-257. DOI number: 10.25258/phyto.v9i2.8072 .
- De Zoysa, M.H.N., H. Rathnayake., R.P. Hewawasam & W.M.D.G.B. Wijayaratne. 2019. Determination of *In Vitro* Antimicrobial Activity of Five Sri Lankan Medicinal Plants against Selected Human Patogenic Bacteria. *Hindawi: International Journal of Microbiology*: 1-9. DOI: <https://doi.org/10.1155/2019/7431439>.
- Djauhariya, E. & R. Rosman. 2008. Status teknologi tanaman cabe jamu (*Piper retrofractum* Vahl.). *Perkembangan Teknologi Tanaman Rempah dan Obat* XX (2): 75-89.
- Elisha, I.L., F.S. Botha., L.J. McGaw & J.N. Eloff. 2017. The Antibacterial Activity of Extracts of Nine Plant Species with Good Activity Against *Escherichia coli* Against Five Other Bacteria and Cytotoxicity of Extracts. *BMC Complementary and Alternative Medicine* 17:133. DOI: 10.1186/s12906-017-1645-z.
- Evizal, R. 2013. Status Fitofarmaka dan Perkembangan Agroteknologi Cabe Jawa (*Piper retrofractum* Vahl.). *Jurnal Agrotropika* 18(1): 34-40.
- Faramayuda, F., J. Permana., A. K. Syam & Elfahmi. 2021. IDENTIFICATION SECONDARY METABOLITES FROM CALLUS *Piper retrofractum* Vahl. *Elkawnie: Journal of Islamic Science and Technology* 7(1): 1-18. DOI: 10.22373/ekw.v7.i1.8630
- Halperin, W. & D.F. Wetherell. 1964. Adventive Embryony in Tissue Cultures of the Wild Carrot, *Daucus carota*. *American Journal of Botany* 51(3): 274 – 283.

- Haryudin, W. & O. Rostiana. 2009. Karakteristik Morfologi Tanaman Cabe Jawa (*Piper retrofractum* Vahl.) di Beberapa Sentra Produksi. *Bul. Littro*. 20(1): 1 – 10.
- Hikal, D.M. 2018. Antibacterial Activity of Piperine and Black Pepper Oil. *Biosciences Biotechnology Research Asia* 15(4): 877-880. <http://dx.doi.org/10.13005/bbra/2697>.
- HiMedia. 2017. Murashige and Skoog Medium. *Plantigen Himedia*. [Online] Available at <https://www.himedialabs.com/intl/en/products/Plant-Tissue-Culture/Media-Salt-and-vitamins-Murashige-Skoog/Murashige-Skoog-Medium-PT021> . Accessed 22nd April, 2020.
- Ikeuchi, M., K. Sugimoto & A. Iwase. (2013). Plant Callus: Mechanisms of Induction and Repression. *The Plant Cell* 25: 3159–3173.
- Indah, P. N. & D. Ermavitalini. 2013. Induksi Kalus Daun Nyamplung (*Calophyllum inophyllum* Linn.) pada Beberapa Kombinasi Konsentrasi 6-Benzylaminopurine (BAP) dan 2,4-Dichlorophenoxyacetic Acid (2,4-D). *JURNAL SAINS DAN SENI POMITS* 2(1):2337-3520.
- Jamal, Y., P. Irawati., A. Fathoni & A. Agusta. 2013. Chemical Constituents and Antibacterial Effect of Essential oil of Javaneese Pepper Leaves (*Piper retrofractum* Vahl.). *Medium Litbangkes* 23(2): 65-72.
- Jeong, M.J., Song, H.J., Park, D.J., Min, J.Y., Jo, J.S., Kim, B.M., Kim, H.G., Kim, Y.D., Kim, R.M., Karigar, C.S & Choi M.S. 2009. High Frequency Plant Regeneration Following Abnormal Shoot Organogenesis in The Medicinal Tree *Hovenia dulcis*. *Plant Cell Tiss. Org. Cult.* 98:59-65.
- Junairiah., A. Rachmah., Y. S. W. Manuhara., Ni'matuzahroh., L. Sulistyorini & Surahmaida. 2019. Pengaruh Hormon Indone Butyric Acid (IBA) dan 6-Benzyl Amino Purin (BAP) terhadap Induksi Kalus *Piper betle* L. var Nigra. *Journal of Pharmacy and Science* 4(2): 85-90.
- Junairiah., D. A. Sofiana., Y. S. W. Manuhara & Surahmaida. 2018. Induksi Kalus *Piper retrofractum* Vahl. dengan Zat Pengatur Tumbuh Auksin dan Sitokinin. *Journal of Pharmacy and Science* 3(2): 41-46.
- Junairiah., Purnomo., E.S.W.Utami., Ni'matuzahroh & L. Sulistyorini. 2018. Callus Induction of *Piper betle* Var Nigra Using 2,4-Dichlorofenoxyacetic Acid and 6-Benzil Amino Purin 10(3): 588-596.
- Khan, M. M. G. & A. A. Shirkhedkar. 2015. Validated Thin Layer Chromatography/ Densitometry Method for the Analysis of Anti-Alzheimer Drug in Bulk and in Capsule Formulation. *J. Chil. Chem. Soc* 60(4): 2650-2654.
- Kritikar, K.R. & B.D. Basu. 1984. *Piper longum* Linn. *Indian medicinal plants*. India: Periodical expert Book Agency.
- Lambert, P.A. 2002. Cellular Impermeability and Uptake of Biocides and Antibiotics in Gram-positive Bacteria and Mycobacteria. *Society for Applied Microbiology* 92. DOI: 10.1046/j.1365-2672.92.5s1.7.x
- Lokhande, P.D., K.R. Gawai., K.M. Kodam., B.S. Kuchekar., A.R. Chabukswar & S.C. Jagdale. 2007. Antibacterial activity of extracts of *Piper longum*. *J. Pharm. And Toxicol* 2(6): 574- 579.

- Machakova, I., Zazimalova, E & George, E.F. Plant growth regulators: induction; auxin, their analogues and inhibitor. In: George, E.F., Hall, M.A., Klerk, DE G-J (Eds.). *Plant propagation by tissue culture* (3rd ed.). Netherlands: Springer, 2008: 275-374.
- Manivannan, A., P. Soundararajan., Y.G. Park & B.R. Jeong. 2015. In Vitro Propagation, Phytochemical Analysis, and Evaluation of Free Radical Scavenging Property of *Scrophularia kakudensis* Franch Tissue Extracts. *BioMed Research International*: 1-11. <http://dx.doi.org/10.1155/2015/480564>
- Montafiz, S. B. & A. Wagiran. 2018. Efficient Callus Induction and Regeneration in Selected *Indica* Rice. *Agronomy* 8(5), pp. 77-88.
- Mudyantini, W., Sobchan & Handyanto, A. 2004. Pengaruh variasi konsentrasi asam naftalen asetat terhadap pertumbuhan dan kandungan flavonoid kalus daun dewa. *Biofarmasi* 2(2):69
- Musthapa, I. & G.G. Gumilar. 2021. Antioxidant and Antibacterial Activity of Acetone Extract of Javanese Pepper Fruit (*Piper retrofractum* Vahl.). *Chemica Isola* 1(1):26-33.
- Nascimento H.H., Silva L.E., Souza R.T., Silva N.P. & Scaletsky I.C. 2014. Phenotypic and genotypic characteristics associated with biofilm formation in clinical isolates of atypical enteropathogenic *Escherichia coli* (aEPEC) strains. *BMC Microbiology* 14:184. DOI: 10.1186/1471-2180-14-184.
- Nakatani, N., R. Inatani., H. Ohta & A. Nishioka. 1986. Chemical constituents of pepper (*Piper* spp.) and application to food preservation: Naturally occurring antioxidative compounds. *Environ. Health Prescriptives* 67: 135-142.
- Octavia, S. & R. Lan. 2013. *The Family Enterobacteriaceae*. The Prokaryotes. Germany: Springer, Berlin, Heidelberg. Pp. 225-286. DOI:10.1007/978-3-642-38922-1_167
- Othman, L., A. Sleiman & R.M. Abdel-Massih. 2019. Antimicrobial Activity of Polyphenols and Alkaloids in Middle Eastern Plants. *Front. Microbiol* 10:911. doi: 10.3389/fmicb.2019.00911
- Pakum, W., O. Inmano & A. Kongbangkerd. 2020. TDZ and 2,4-D on in vitro propagation of panda plant from leaf explants. *SBFPO* 27(1): 41-48.
- Panphut, W., T. Budsabun & P. Sangsurya. 2020. In Vitro Antimicrobial Activity of *Piper Retrofractum* Fruit Extracts Against Microbial Pathogens Causing Infection in Human and Animals. *Hindawi: International Journal of Microbiology*: 1-6. <https://doi.org/10.1155/2020/5638961>.
- PubChem [Internet]. Bethesda (MD): National Library of Medicine (US), National Center for Biotechnology Information; 2004-. PubChem Compound Summary for CID 15965, Picloram. Available at <https://pubchem.ncbi.nlm.nih.gov/compound/Picloram> . Accessed 22nd April 2021.
- Ribeiro, I.G., C. R. M. Gayer., T. C. de Castro., M. G. P. Coelho & N. Albarello. 2015. Compact Callus Cultures and Evaluation of the Antioxidant Activity of *Hovenia dulcis* Thunb. (Rhamnaceae) Under *In Vivo* and *In Vitro* Culture Conditions. *Journal of Medicinal Plant Research* 9(1), pp. 8-13.

- Rostiana, O., S.M.D. Rosita., W, Haryudin., B. Martono., M. Raharjo., Hernani., S. Aisyah & Nasrun. 2005. *Karaterisasi cabe jawa dan purwoceng, seleksi pohon induk, dan efisiensi pemupukan cabe jawa di sentra produksi*. Laporan Teknis Penelitian 2004. Buku II : 95-127. Balittro.
- Robinson, C.M., James F.S., Michael J.S & Alison D.O. 2006. Shiga Toxin of Enterohemorrhagic *Escherichia coli* Type O157:H7 Promotes Intestinal Colonization. *PNAS* 103(25): 9667-9672. www.pnas.org/cgi/doi/10.1073/pnas.0602359103.
- Ruswaningsih, F. 2007. Pengaruh Konsentrasi Ammonium Nitrat dan BAP terhadap Pertumbuhan Eksplan Pucuk *Artemisia annua* L. pada Kultur In Vitro. Skripsi, Fakultas Pertanian UNS, Surakarta.
- Sabzevar, T.S., R. A. Ghavidel & S. Foroghian. 2015. The Effect of Phytohormones on Lavender (*Lavandula Angustifolia* Mill.) Organogenesis. *Journal of Pharmacy and Pharmacology* 3: 338-344. DOI: 10.17265/2328-2150/2015.07.004.
- Salman, M.N. 2002. Establishment of Callus and Cell Suspension Cultures from *Gypsophila paniculate* Leaf Segments and Study of the Attachment of Host Cells by *Erwinia herbicola* pv. *gypsophilae*. *Plant Cell Tiss. Org. Cult.* 69:189-196.
- Sener, O., E. Can., M. Arslan & N. Celis. 2008. effect of Genotype and Picloram Concentrations on Callus Induction and Plant Regeneration from Immature Inflorescens of Spring Barley Cultivars (*Hordeum vulgare* L.). *Biotechnology and Biotechnological Equipment* 22(4): 915-920. DOI: 10.1080/13102818.2008.10817578
- Shankaracharya, N.B., L.J. Rao & S. Nagalaksmi. 1997. Characterisation of chemical constituents of Indian long pepper (*Piper longum* L.). *J. Food Sci. Technol.* 34(1): 73-75.
- Smith, M. K. & R. A. Drew. 1990. Current application of tissues culture in plant propagation and improvement. *Australian Journal of Plant Physiology* 17: 267-289.
- Soltanipol, M., Mohammadi M., Rahn timer H., & Abbaszadeh B. 2011. *Journal of Agronomy and Plant Breeding* 7: 45-54.
- Srinivasa, R.P., J. Kaiser., P. Madhusudhan., G. Anjani & B. Das. 2001. Antibacterial activity of isolates from *Piper longum* and *Taxus bacc baccata*. *Pharm. Biol.* 39: 236- 238.
- Stroka, J., B. Spangenberg & E. Anklam. 2002. New Approaches in TLC-Densitometry. *Journal of Liquid Chromatography & Related Technologies* 25(10-11):1497-1513. DOI: <https://doi.org/10.1081/JLC-120005700>
- Tiwari, P., Kumar, B., Kaur, M., Kaur, G., & Kaur, H. (2011). Phytochemical screening and extraction: a review. *Internationale pharmaceutica sciencia* 1(1): 98-106.
- Warrier, P.K., V.P.K. Nambiar & K.C. Raman. 1995. *Piper longum* Linn.: Indian medicinal plants. India: Orient Longman Ltd.
- Wattinema. 1988. *Zat Pengatur Tumbuh Tanaman*. PAU Bioteknologi, Institut Pertanian Bogor, Bogor.
- Wattimena, G. A. 1991. *Zat Pengatur Tumbuh Tanaman*. Pau Bioteknologi, Institut Pertanian Bogor, Bogor.



- WenJue, Z., W. DongHong., X.XiaoWei., W. BingYi., L. Qian., S. K. Satyanarayanan & W. Zijian. 2011. A gas chromatography/mass spectrometry method for the simultaneous analysis of 50 phenols in wastewater using deconvolution technology. *Chinese Sci Bull* 56(3): 275-284.
- Widyaningrum , I., Wibisono, N. & Kusumawati, A. H. (2020). Effect of extraction method on antimicrobial activity against staphylococcus aureus of tapak liman (elephantopus scaber l.) leaves. *International Journal of Health & Medical Sciences* 3(1): 105-110. DOI: <https://doi.org/10.31295/ijhms.v3n1.181>.
- Yang, Y.C., S.G. Lee., H.K. Lee., M.K. Kim., S.H. Lee & H.S. Lee. 2002. A piperidine amide extracted from *Piper longum* L. fruit shows activity against *Aedes aegypti* mosquito larvae. *J. Agric. Food Chem* 50(13): 3765-3767.
- ITIS. 2021. *Integrated Taxonomic Information System–Report*. [Online] Available at https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=506526#null. DOI: <https://doi.org/10.5066/F7KH0KBK>. Accessed 9th January 2022.