DAFTAR PUSTAKA

Addgene. 2016. pTA7002. https://www.addgene.org/vector-database/7040/.

Arimarsetiowati, R. Daryono, B. S. Astuti, Y. T. M., Prastowo, E., dan Semiarti, E. 2023. Regeneration and Development of *Coffea arabica* L. plants trough indirect somatic embryogenesis. *Coffee Science*, 18:e182078: 1-15.

Arimarsetiowati, R., Daryono, B. S. Astuti, Y. T. M., dan Semiarti, E. 2023. Anatomical Studies and Evaluation of Genetic Stability in Planlets Derived from Somatic Embyos of Arabica Coffee. *Hayati: J. of Biosciences*, 30 (3): 510-521.

Arimarsetiowati, R., Putra, A. C. D., Suwastono, M. R., Umami, L. A. dan Semiarti, E. 2023. The effect of 2,4-D, thidiazuron and BAP on calli induction of Arabica coffee (*Coffea arabica* L.). *International Conference on Modern and Sustainable Agriculture (ICOMSA), IOP Conf Series* 133: 1-7.

Arimarsetiowati, R. 2023. Mikropropagasi *Coffea arabica* L. Klon *AS2K* melalui Embriogenesis Somatik dan Transformasi Genetik dengan Gen *AtRKD4*. *Disertasi*. Yogyakarta: UGM. 213 p.

Avilez-Montalvo, J., Quintana-Escobar, A.O., Méndez-Hernández, H.A., Uc-chuc, M.Á., Brito-Argáez, L., Aguilar-Hernández, V., Galaz-Ávalos, R.M., Loyola-Vargas, V.M. 2022. Auxin-cytokinin cross talk in somatic embryogenesis of *Coffea canephora*. *Plants*, 11(15): 1-21.

Ayil-Gutiérrez, B, A., Galaz-Avalos, R. M., Peña-Cabrera, E, and Loyola-Vargas, V. M. 2013. Dynamics of the concentration of IAA and some of its conjugates during the induction of somatic embryogenesis in *Coffea canephora*, *Plant Signal. Behav*, 8: 1-10.

Bartos, P. M. C., Gomes, H. T., Gomes, S. M., Filho, S. C. V., Teixeira, J. B.. Pereira, J. E. S. 2018. Histology of somatic embryogenesis in *Coffea arabica* L. *Biologia*, 73: 1255-1265.

Bansal, S., Sharma, M.K., Joshi, P., Malhotra, E.V., Latha, M., dan Malik, S.K. 2023. An efficient direct organogenesis protocol for *in vitro* clonal propagation of *Rubia cordifolia* L. *Industrial Crops and Products*, 208: 1-11.

Bawin, Y., Ruttink, T., Staelens, A., Haegeman, A., Stoffelen, P., Mwanga, J.C., Roldan-Ruiz, I., Honnay, O., Janssens, S.B. 2020. Phylogenomic analysis clarifies the evolutionary origin of Coffea arabica. Journal of Systematics and Evolutionary, 59(5): 953-963

Campos, N. A., Panis, B., Carpentier, S. C. 2017 Somatic embryogenesis in coffee the evolution of biotechnology and the integration of Omics technologies offer great opportunities. *Front Plant Scr*, 8(1460) 1-12

Chakraborty, T., Chaitanya, K.V., dan Akhtar, N. 2023. Effect of Growth Regulators, Organic Nitrogen Source, Various Nutrient, and Non-Nutrient Adjuvants on Somatic Embryogenesis in Red Sandalwood (*Pterocarpus santalinus*). *Journal of Plant Growth Regulation*, 47 (5): 1-17.

Chardin, C., Girin, T., Roudler, F., Meyer, C., Krapp, A. 2014. The plant *RWPRK* transcription factors: key regulators of nitrogen responses and of gametophyte development. *J Exp Bot*, 65: 5577-5587

Chumakov, M. I. 2013. Protein apparatus for horizontal transfer of agrobacterial T-DNA to eukaryotic cells. *Biochemistry*, 78 :1321–1332

Debnath, S. C. 2018. In Thidiazuron: From Urea Derivative to Plant Growth Regulator (eds. Naseem, A. & Mohammad, F.). *Springer*, pp: 139-158.

De Rybel, B., Moller, B., Yoshida, S., Grabowicz, I., Barbier de Reuille, P, Boeren, S., Smith, R.S., Borst, J.W., Weijers, D. 2013. A *bHLH* complex controls embryonic vascular tissue establishment and indeterminate growth in *Arabidopsis*. *Dev Cell*, 24: 426–437.

Farah, A. 2012. *Coffee :Emerging Health Effects and Disease Prevention, 1st Edition.* John Willey & Sons, Inc and Institute of Food Technologists (USA): Wiley-Blackwell Publising Ltd. pp : 21-58.

Gelvin, S.B. 2010. Plant proteins involved in *Agrobacterium*-mediated genetic transformation. *Annu Rev Phytopathol*, 48: 45–68.

Geisler, M., Aryal, B., di Donato, M., Hao, P. 2017. A critical view on *ABC* transporters and their interacting partners in auxin transport. *Plant Cell Physiol*, 58: 1601–1614.

Gimase, J. M., W. M. Thagana, D. T. Kirubi, E. K. Gichuru, C. W. Kathurima. 2014. Beverage quality and biochemical attributes of arabusta coffee (*C arabica* L. x *C. canephora* Pierre) and their parental genotypes. *African Journal of Food Science*. 8(9): 456-464.

Guan, Y., Li, S., Fan, X., dan Su, Z. 2016. Application of Somatic Embryogenesis in Woody Plants. *J. Frontier in Plant Science*, 7(938): 1-12.

Greer, M.S. 2008. Effects of Ammonium Nitrate upon Direct Somatic Embryogenesis and Biolistic Transformation Of Wheat. *Thesis*. Canada: University of Lethbridge. 90 p.

Hapsoro, D., Setiawan, D., Hamiranti, R. dan Yusnita, Y. 2019. Pengaruh 2-iP, BA, 2, 4-D, dan TDZ pada embriogenesis somatik in vitro kopi robusta unggul Lampung. *Jurnal Agrotek Tropika*, 7(3): 527-537.

Haviz, M. 2014. Konsep Dasar Embriologi : Tinjauan Teoritis. *J. Sainstek,* 6 (1) : 96-101.

Ibrahim, M.S.D., dan Sulistiyorini, I. 2021. Kultur embrio tiga spesies kopi pada umur buah dan formulasi media yang berbeda, *Jurnal Tanaman Industri dan Penyegar*, 8(3): 151-164.

Ikeuchi, M., Iwase, A., Rymen, B., Harashima, H., Shibata, M., dan Ohnuma, M. 2015. *PRC2* Represses Dedifferentiation of Mature Somatic Cells in *Arabidopsis*. *J. Nat. Plants*, 1 : 1-7.

Indrawanto C, Kamawati E, Munarso, Prastowo SJ, Rubijo B, Siswanto. 2010. *Budidaya dan Pascapanen Kopi*. Pusat Penelitian dan Pengembangan Perkebunan. Bogor. Indonesia. 75 p.

Integrated Taxonomic Information System Report (ITIS). 2023. *Coffea arabica* L. (https://www.itis.gov). Diakses tanggal 23 Februari 2023.

Indonesian Coffee and Cocoa Research Institute (ICCRI). 2023. Kopi Arabika klon *AS2K*. (https://iccri.net/product/kopi-arabika-klon-as2k). Diakses tanggal 23 Februari 2023.

Jia, Y., X. Yao, M. Zhao, Q. Zhao, Y. Du, C. Yu, F. Xie. 2015. Comparison of soybean transformation efficiency and plant factors affecting transformation during the *Agrobacterium* infection process. *Int. J. Mol. Sci*, 16:18522-18543.

Jeong, S., Palmer, T.M., Lukowitz, W. 2011. The *RWP-RK* factor *GROUNDED* promotes embryonic polarity by facilitating *YODA MAP* kinase signaling. *Curr Biol*, 21: 1268–1276.

Juliana, T., Isda, M., N., dan Iriani, D. 2017. Embriogenesis dari Kalus Manggis (*Garcinia mangostana* L.) Asal Bengkalis dengan Pemberian BAP dan Madu secara *In Vitro*. *J. Al Kauniyah*, 12 (1) : 8-17.

Klimaszewska, K., Hargreaves, C., Lelu-Walter, M., Trontin, J. 2016. *Advances in conifer somatic embryogenesis since year 2000 In: Germana MA, Lambardi M in vitro embryogenesis in higher plants methods in molecular biology*. Springer Science and Business Media, New York, pp 131-166.

Krenek, P., Samajova, O., Luptovciak, I., Doskocilova, A., Komis, G., Samaj, J. 2015. Transient plant transformation medited by *Agrobacterium tumefaciens*: Principles, methods and applications. *Biotechnology Advances*. 33(6): 1024-1042.

Lashermes, P., Combes, M.C., Robert, J., Trouslot, P., D'Hont, A., Anthony, F., dan Charrier, A. 1999. Molecular characterisation and origin of the *Coffea arabica* L. genome. *Molecular and General Genetics*. 261 (2): 259–266

Lee, L.-Y., dan Gelvin, S. B. 2008. T-DNA Binary Vectors and Systems. *Plant Physiology*, 146: 325-332.

Lestari, E., G. 2011. Peranan Zat Pengatur Tumbuh dalam Perbanyakan Tanaman melalui Kultur Jaringan. *J. AgroBiogen*, 7 (1) : 63-68.

Lodge, J., Lund, P., & Minchin, S. 2007. *Gene Cloning : Principles and Applications.* Birmingham: Taylor & Francis Group. Pp. 462.

Long, Y., Yang, Y., Pan, G., dan Shen, Y. 2022. New Insight into Tissue Culture Plant-Regeneration Mechanisms. *Front. Plant Sci*. 13: 1-15.

Méndez-Hernández, H.A.; Quintana-Escobar, A.O.; Uc-Chuc, M.Á.; Loyola-Vargas, V.M. 2021. Genome-wide analysis, modeling, and identification of amino acid binding motifs suggest the involvement of *GH3* genes during somatic embryogenesis of *Coffea canephora*. *Plants*, 10(10): 1-20.

Márquez-López, R.E., Pérez-Hernández, C.A., Kú-González, Á., Galaz-Ávalos, R.M., Loyola-Vargas, V.M. 2018. Localization and transport of indole-3-acetic acid during somatic embryogenesis in *Coffea canephora*. *Protoplasma*, 255: 695–708.

Mursyanti. E., Purwantoro, A., Moeljopawiro, A., Semiarti, E. 2015. Induction of somatic embryogenesis through overexpression of *AtRKD4* genes in *Phalaenopsis* "Sogo Vivien". *Indonesian Journal of Biotechnology*. 20: 42-53.

Nakano, Y. 2017. Effect of acetosyringone on *Agrobacterium*-mediated transformation of *Eustoma grandiflorum* leaf disks. *JARQ*, 51:351-355.

Nawy, T., Bayer, M., Mravec, J., Friml, J., Birnbaum, K.D., Lukowitz, W. 2010. The *GATA* factor *HANABA TARANU* is required to position the proembryo boundary in the early *Arabidopsis* embryo. *Dev Cell*. 19: 103–113.

Nesper, M., Kueffer, C., Krishnan, S., Kushalappa, Dan C., Ghazoul, J. 2019. Simplification of shade tree diversity reduces en cycling resilience in coffee agroforestry. *J. Appl. Ecol*, 56 (1): 119-131.

Ogunyale, O.G., Fawibe, O.O., Ajiboye, A.A., dan Agboola, D.A. 2014. A Review of Plant Growth Substances: Their Forms, Structure, Synthesis, and Functions. *J. of Advan. Laboratory Research in Biology*, 5(4):152-168.

Ossai, C.O., Balogun, M.O., dan Maroya, N.G. 2023. Organogenesis versus Somatic Embryogenesis pathway efficiencies in in vitro propagation of white and water yams. *In Vitro Cellular and Developmental Biology-Plant*, 10397: 1-11.

Panggabean E. 2011. *Buku Pintar Kopi.* Jakarta (ID): Agro Media Pustaka. 226 p.

Popov, M., Petrov, S., Nacheva, G., Ivanov, I., dan Reichl, U. 2011. Effects of a Recombinant Gene Expression on *ColE1-like* plasmid Segregation in *Escherichia coli*. *BMC Biotechnology*, 11: 1-12

Priyono, Florin, B., Rigoreau, M., Ducos, E.-P., Sumirat, U., Mawardi, S., Lambot, C., Broun, P., Petiard, V., Wahyudi, T., dan Crouzillat, D. 2010. Somatic embryogenesis and vegetative cutting capacity are under distinct genetic control in *Coffea canephora* Pierre. *Plant Cell Rep*, *29*, 343–357.

Quintana-Escobar, A.O., Nic-Can, G.I., Galaz-Ávalos, R.M., Loyola-Vargas, V.M., Góngora-Castillo, E. 2019. Transcriptome analysis of the induction of somatic embryogenesis in *Coffea canephora* and the participation of arf and *AUX/IAA* genes. *PeerJ*, 7, e7752: 1-17.

Rahardjo P. 2012. *Panduan Budi Daya dan Pengolahan Kopi Arabika dan Robusta*. Trias QD, editor. Jakarta(ID): Penerbar Swadaya. 212 p.

Rahmah, S., Rahayu, T., dan Hayati, A. 2018. Kajian Penambahan Bahan Organik pada Media Tanam VW pada Organogenesis Anggrek *Dendrobium* secara *In Vitro*. *J. Sains Alami*, 1 (1) : 93-103.

Rahmi, A., F., Purwito, A., Husni, A., dan Dinarti, D. 2017. Embriogenesis dan Desikasi Embrio Somatik Jeruk Keprok Batu (*Citrus reticulata B.*) untuk Meningkatkan Frekuensi Perkecambahan. *J Hort Indonesia*, 8 (2) : 79 – 87.

Randriani, E., dan Dani. 2018. *Pengenalan Varietas Unggul Kopi*. *Indonesian Agency for Agricultural Research and Development* (IAARD) Press. 78 p.

Schauser, L., Wieloch, W., Stougaard, J. 2005. Evolution of NIN-like proteins in *Arabidopsis*, rice, and *Lotus japonicus*. *J Mol Evol*. 60: 229-237

Schlereth, A., Moller, B., Liu, W., Kientz, M., Flipse, J., Rademacher, E.H., Schmid, M., Jurgens, G., Weijers, D. 2010. *MONOPTEROS* controls embryonic root initiation by regulating a mobile transcription factor. *Nature*. 464: 913–916.

Schievano, E., Fitello, C., De Angelis, E., Mammi, S., Navarini, L. 2014 Rapid Authentication of Coffee Biends and Quantification of *16-O-Methylcafestol* in Roasted Coffee Beans by Nuclear Magnetic Resonance. *Jurnal of Agr and Food Chem*, 62(51): 12309-12314.

Setiaji, A., Setiari, N., Semiarti, E. 2018. Induksi Tunas dari Protokorm Intake dan Fase Awal Perkembangan *Dendrobiom phalaenopsis* secara *in vitro*. *J. Pros Sem Nas Masy Biodiv Indonesia*, 4 (1) : 20-27.

Semiarti, E., Indranto, A., Purwantore, A.. Isminingsih, S., Suseno, N, Ishikawa T. Yoshioka Y, Machida, Y. and Machida, C. 2007. *Agrobacterium* mediated transformation of the wild orchid species *Phalaenopsis amabilis*. *Plant Biotechnology*, 24: 265-272

Silva, A. T., Barduche, D., do Livramento, K. G., and Paiva, L. V. 2014. A putative *BABY BOOM*-like gene (*CaBBM*) is expressed in embryogenic calli and embryogenic cell suspension culture of *Coffea arabica* L. *In vitro Cell Dev. Biology Plant*, 51: 93-101.

Sisharmini, A., Apriana, A., dan Sustiprijatno. 2010. Induksi Kalus dan Regenerasi Beberapa Genotipe Gandum (*Triticum aestivum* L.) secara *In Vitro*. *J. Agro Biogen*, 6 (2) : 57-64.

Smertenko, A., dan Bozhkov, P. V. 2014. Somatic embryogenesis: life and death processes during apical-basal patterning. *J. Exp. Bot.*, 65: 1343-1360

Smith, Z.R., Long, J.A. 2010. Control of *Arabidopsis* apical-basal embryo polarity by antagonistic transcription factors. *Nature*, 464: 423–426.

Tvorogova, T.E. dan Lutova, L.A. 2018. Genetic regulation of zygotic embryogenesis in angiosperm plants. *Russ Plant J Physiol*. 66: 1-14.

Vogt, M. A. B. 2020, Developing stronger association between market value of coffee and functional biodiversity. *Journal of Environmental Management*. 269: 1-13.

Waki, T., Hiki, T., Watanabe, R., Hashimoto, T., Nakajima, K. 2011. The *Arabidopsis RWP-RK* protein *RKD4* triggers gene expression and pattern formation in early embrogenesis. *Curr. Biol*., 21: 1277-1281.

Wardana, S., T. 2016. Variasi Rasio Amonium dan Nitrat terhadap Perkembangan Embrio Somatik Bawang Putih (*Allium sativum*) secara *In Vitro*. *J. Penelitian Sains*, 18 (2) : 80-83.

Wendrich, J.R. dan Weijers, D. 2013. The *Arabidopsis* embryo as a miniature morphogenesis model. *New Phytologist*, 199: 14-25.

Yusnita, 2015. *Kultur Jaringan Tanaman: Sebagai Teknik Penting Bioteknologi Untuk Menopang Pembangunan Pertanian*. Universitas Lampung: Bandar Lampung. 86 p.

Zeng, X., dan Zhao, D. 2015. *In vitro* regeneration and *Agrobacterium tumefaciens* mediated genetic transformation in asakura-sanshoo (*Zanthoxylum piperitum* (L.) DC. F. *Inerme* Makino) an important medicinal plant. Pharmaconogsy Mag. 11(42): 374-380.