



REFERENCES

- Amin, N., Ahmad, N., Khalifa, M.A.S., Du, Y., Mandozai, A., Khattak, A.N. and Piwu, W., 2023. 'Identification and Molecular Characterization of RWP-RK Transcription Factors in Soybean', *Genes (Basel)*, 14(2), p. 369.
- Antoneli, A., 2022. *The Hidden Universe: Adventures in Biodiversity*. 1st edn. London: Ebury Press.
- Arimarsetiowati, R. and Ardiyani, F., 2012. 'Pengaruh penambahan auxin terhadap pertunasan dan perakaran kopi arabika perbanyakan Somatik Embriogenesis', *Pelita Perkebunan*, 28(2), pp. 82-90.
- Arimarsetiowati, R., Putra, A.C.D.S., Suwastono, M.R., Umami, L.A., Daryono, B.S., Astuti, Y.T.M. and Semiarti, E., 2023. 'The effect of 24-D thidiazuron and BAP on calli induction of arabica coffee (*Coffea arabica* L.)', *IOP Conference Series: Earth and Environmental Science*, 1133(1), p. 012010.
- Berecha, G., Aerts, R., Vandepitte, K., Van Glabeke, S., Muys, B., Roldán-Ruiz, I. and Honnay, O., 2014. 'Effects of forest management on mating patterns, pollen flow and intergenerational transfer of genetic diversity in wild Arabica coffee (*Coffea arabica* L.) from Afromontane rainforests', *Biological Journal of the Linnean Society*, 112(1), pp. 76-88.
- Bhatla, S.C. and Lal, M.A., 2018. *Plant Physiology, Development and Metabolism*. New Delhi: Springer, pp. 569, 570, 605-609.
- DaMatta, F.M., Ronchi, C.P., Maestri, M. and Barros, R.S., 2007. 'Ecophysiology of coffee growth and production', *Brazilian Journal of Plant Physiology*, 19(4), pp. 485-510.
- Davis, A.P., Govaerts, R., Bridson, D.M. and Stoffelen, P., 2006. An annotated taxonomic conspectus of the genus *Coffea* (Rubiaceae). *Botanical Journal of the Linnean Society*, 152(4), pp.465-512.
- Dwiyani, R., 2015. *Kultur Jaringan Tanaman*. Denpasar Barat: Pelawa Sari, pp. 1-3.
- Etienne, H., Breton, D., Breitler, J.C., Bertrand, B., Déchamp, E., Awada, R., Marraccini, P., Léran, S., Alpizar, E., Campa, C., Courtel, P., Georget, F. and Ducos, J.P., 2018. 'Coffee somatic embryogenesis: how did research, experience gained and innovations promote the commercial propagation of elite clones from the two cultivated species?', *Frontiers in Plant Science*, 9.
- George, I.A., Khan, F.S., 2008. A modified mini-prep method for economical and rapid extraction of genomic DNA in plants. *Plant Molecular Biology Reporter*, 22, pp.89a-89e.
- Guan, Y., Li, S., Fan, X. and Su, Z., 2016. 'Application of somatic embryogenesis in woody plants', *Frontiers in Plant Science*, 7, p. 908.
- Hapsari, L., Wahyudi, D., Azrianingsih, R. and Arumingtyas, E.L., 2015. 'Genome identification of bananas (*Musa* L.) from East Java, Indonesia assessed with PCR-RFLP of the internal transcribed spacers nuclear ribosomal DNA', *International Journal of Biosciences*, 7(3), pp. 42-52.



- Hapsoro, D., Setiawan, D., Hamiranti, R. and Yusnita, Y., 2019. 'Pengaruh 2-iP, BA, 2,4-D dan TDZ pada embriogenesia somatik in vitro kopi robusta unggul Lampung', *Jurnal Agrotek Tropika*, 7(3), pp. 527-537.
- Ibrahim, M.S.D., Hartati, Rr.S., Rubiyo, R., Purwito, A. and Sudarsono, S., 2013. 'Direct and Indirect Somatic Embryogenesis on Arabica Coffee (*Coffea arabica*)', *Indonesian Journal of Agricultural Science*, 14(2), pp. 79.
- Iserte, J. A., Stephan, B.I., Goñi, S.E., Borio, C.S., Ghiringhelli, P.D. and Lozano, M.E., 2013. 'Family-Specific Degenerate Primer Design: A Tool to Design Consensus Degenerated Oligonucleotides', *Biotechnology Research International*, p. 383646.
- Jimenez, V. M., 2005. 'Involvement of Plant Hormones and Plant Growth Regulators on in Vitro Somatic Embryogenesis' *Plant Growth Regulation*, 47(2), pp. 91-110.
- Larcher, W., 2000. *Ecofisiologia Vegetal*. São Carlos, São Paulo: Rima, pp. 297-298.
- Liu, Z., Ding, Y., Wang, F., Ye, Y. and Zhu, C., 2016. Role of salicylic acid in resistance to cadmium stress in plants. *Plant Cell Reports*, 35(4), pp. 719-731.
- Michael, P.S., 2011. 'Effects of coconut water on callus initiation and plant regeneration potentials of sweet potato', *Journal and Proceedings of the Royal Society of New South Wales*, 144(3&4), pp. 91-101.
- Mishra, M.K., Tornincasa, P., De Nardi, B., Asquini, E., Dreos, R., Del Terra, L., Rathinavelu, R., Rovelli, P., Pallavicini, A., Graziosi, G., 2011. 'Genome organization in coffee as revealed by EST, PCR-RFLP, SNPs, and SSR analysis', *Journal of Crop Science and Biotechnology*, 14, pp. 25-37.
- Nugroho, D., Mawardi, S., Yusianto, Y., Arimersetiowati, R., 2012. 'Karakterisasi mutu fisik dan cita rasa biji kopi Arabika varietas Maragogipe (*Coffea arabica* L. var. Maragogype Hort. ex Froehner) dan seleksi pohon induk di Jawa Timur', *Pelita Perkebunan*, 28, pp. 1-13.
- Palmer, L., 2010. 'Using Harry Potter to introduce students to DNA fingerprinting and forensic science', *The American Biology Teacher*, 72(4), pp. 241-244.
- Pramunadipta, S., Widiastuti, A., Wibowo, A., Suga, H. and Priyatmojo, A., 2022. 'Development of PCR-RFLP Technique for Identify Several Members of *Fusarium incarnatum-equiseti* Species Complex and *Fusarium fujikuroi* Species Complex', *Plant Pathology Journal*, 38(3), pp. 254-260.
- Rahardjo, P., 2012. *Panduan Budi Daya dan Pengolahan Kopi Arabika dan Robusta*. Jakarta: Penerbit Swadaya.
- Rismayanti, A.Y. and Nafi'ah, H.H., 2021. 'Modifikasi media pada induksi kalus kopi arabika (*Coffea arabica* L.) berbuah kuning', *Agro Wiralodra*, 4(2), pp. 42-49.
- Rojas-Orduna, E., Hernández-Carrión, M., Gómez-Franco, J.D., Narváez-Cuenca, C.-E. and Sánchez-Camargo, A. del P., 2023. 'Utilization of red and yellow *Coffea arabica* var. *Caturra* pulp: macronutrient analysis, carotenoid extraction, and encapsulation for dairy product enrichment', *Frontiers in*



- Rostiana, O. and Seswita, D., 2007. 'Pengaruh Indole Butyric Acid dan Naphtaleine Acetic Acid Terhadap Induksi Perakaran Tunas Piretrum (*Chrysanthemum cinerariifolium* (Trevir.) Vis.) Klon Prau 6 Secara In Vitro', *Buletin Penelitian Tanaman Obat dan Aromatik*, 17, pp. 39-48.
- Santosa, K.M., Supriyadi, Anggrahini, S. and Rahmadian, Y., 2020. 'Sensory analysis, caffeine, chlorogenic acid and non-volatile taste compounds of Arabica coffee (*Coffea arabica*) fermented with sugar addition for brew taste', *Indonesian Food and Nutrition Progress*, 17(2), pp. 37-44.
- Santoso, T.J., Hidayat, S.H., Herman, M., Aswidinnoor, H. and Sudarsono, 2008. 'Identitas dan Keragaman Genetik Begomovirus yang Berasosiasi dengan Penyakit Keriting pada Tomat Berdasarkan Teknik Polymerase Chain Reaction (PCR)- Restriction Fragment Length Polymorphism (RFLP)', *Jurnal AgroBiogen*, 4(1), pp. 9-17.
- Sarin, B., Clemente, J.P.M. and Mohanty, A., 2013. 'PCR-RFLP to distinguish three *Phyllanthus* sp., commonly used in herbal medicines', *South African Journal of Botany*, 88, pp. 455-458.
- Scalabrin, S., Toniutti, L., Di Gaspero, G., Scaglione, D., Magris, G., Vidotto, M., Pinosio, S., Cattonaro, F., Magni, F., Jurman, I., Cerutti, M., Suggi Liverani, F., Navarini, L., Del Terra, L., Pellegrino, G., Ruosi, M.R., Vitulo, N., Valle, G., Pallavicini, A., Graziosi, G., Klein, P.E., Bentley, N., Murray, S., Solano, W., Al Hakimi, A., Schilling, T., Montagnon, C., Morgante, M. and Bertrand, B., 2020. 'A single polyploidization event at the origin of the tetraploid genome of *Coffea arabica* is responsible for the extremely low genetic variation in wild and cultivated germplasm', *Scientific Reports*, 10(1), p. 4642.
- Semiarti, E., Mose, W. and Widayati, A., 2020. 'Isolation and characterisation of putative embryo gene *DIRKD4* from Indonesian orchid *Dendrobium lineale* rolfe', *AIP Conference Proceedings*, 2260(1), p. 060008.
- Sihombing, T.P., 2011. 'Studi Kelayakan Pengembangan Usaha Pengolahan Kopi Arabika (Studi Kasus PT Sumatera Speciality Coffees)', Skripsi. Bogor: Institut Pertanian Bogor.
- Sousa, E.C. and Raizada, M., 2020. 'Contributions of African Crops to American Culture and Beyond: The Slave Trade and Other Journeys of Resilient Peoples and Crops', *Frontiers in Sustainable Food Systems*, 4, p. 586340.
- Spaniolas, S., May, S.T., Bennet, M.J. and Tucker, G.A., 2006. 'Authentication of Coffee by Means of PCR-RFLP Analysis and Lab-on-a-Chip Capillary Electrophoresis', *Journal of Agricultural and Food Chemistry*, 54(20), pp. 7466-7470.
- Tarach, P., 2021. 'Application of polymerase chain reaction-restriction fragment length polymorphism (RFLP-PCR) in the analysis of single nucleotide polymorphisms (SNPs)', *Folia Biologica et Oecologica*, 17, pp. 48-53.
- Velasquez, D., Sanchez, A., Sarmiento, S., Toro, M., Maiza, M. and Sierra, B., 2020. 'A Method for Detecting Coffee Leaf Rust through Wireless Sensor Networks, Remote Sensing, and Deep Learning: Case Study of the *Caturra*



UNIVERSITAS
GADJAH MADA

Somatic Embryogenesis of Arabica Coffee (*Coffea arabica* var. *caturra*) and Molecular Characterization of the RKD4 Homologous gene

Bimo Rizki Abdusshamad, Prof. Dr. Endang Semiarti, M.S.,M.Sc.

Universitas Gadjah Mada, 2024 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Variety in Colombia', *Applied Sciences*, 10(2), p. 697.

Waki, T., Hiki, T., Watanabe, R., Hashimoto, T. and Nakajima, K., 2011. 'The Arabidopsis RWP-RK Protein *RKD4* Triggers Gene Expression and Pattern Formation in Early Embryogenesis', *Current Biology*, 21(15), pp. 1277-1281.

Zhang, M., Wang, A., Qin, M., Qin, X., Yang, S., Su, S., Sun, Y. and Zhang, L., 2021. 'Direct and Indirect Somatic Embryogenesis Induction in *Camellia oleifera* Abel', *Frontiers in Plant Science*, 12, p. 644389.