DAFTAR PUSTAKA

Abdullah, F.S., Jaya, A.S., Widayat. 2017. Penentuan waktu perendaman sel (fase mitosis) akar bawang merah (*Allium ascalonicum* L.) menggunakan safranin untuk mendukung praktikum biologi. *Bioleuser*. 1(3): 86-91.

Abidin, A.Z., 2014. Studi indeks mitosis bawang untuk pembuatan media pembelajaran preparat mitosis. *BioEdu Berkala Ilmiah Pendidikan Biologi*. 3(3): 571-579.

Agashe, S.N. and Caulton, E. 2009. *Pollen and Spores: Applications with Special Emphasis on Aerobiology and Allergy.* CRC Press, Boca Raton.

Agatha, B. 2021. Analisis Kromosom Anggrek *Vanda celebica*, *Vanda Dearei*, dan Hasil Persilangannya. *Skripsi*. Universitas Sebelas Maret, Surakarta.

Aguirre, A.,M. Vallejo-Marín, E.M. Piedra-Malagón, R. Cruz-Ortega, and R. Dirzo. 2009. Morphological variation in the flowers of *Jacaratia mexicana* A. DC. (Caricaceae), a subdioecious tree. *Plant Biology*. 11:417–424.

Aisy, I.R. 2019. Keanekaragaman Jenis, Kemelimpahan dan Potensi Peran Serangga pada Tanaman Pepaya Gunung (*Carica candamarcensis* Hook. f.) di Dieng, Jawa Tengah. *Skripsi*. Universitas Gadjah Mada, Yogyakarta.

Alfiah, I. 2016. Aktivitas Antibakteri Fraksi Etil Asetat Ekstrak Etanol Daun Pepaya Gunung (*Carica pubescens* Lenne & K. Koch) terhadap Bakteri *Salmonella typhi* secara *in Silico* dan *in Vitro*. *Skripsi*. Universitas Islam Negeri Maulana Malik Ibrahim, Malang.

Ali, M.A., Al-Hemaid, F.M.A. 2011. Taxonomic significance of trichomes micromorphology in cucurbits. *Saudi Journal Biology Science* 18(1): 87–92.

Amalia F.R. 2014. Produksi Bahan Pemanis dari Kulit Buah Carica *(Carica pubescens)* dengan Metode Hidrolisis Asam. *Skripsi*. Universitas Gadjah Mada, Yogyakarta

Anam, M.K. 2019. Karakter Trikoma Tumbuhan Waru (*Taliparitiliaceum*) pada Ketinggian Tempat Berbeda di Kabupaten Jember sebagai Buku Ilmiah Populer. *Skripsi*. Universitas Negeri Jember, Jember.

Aprianty, N.M.D. dan Kriswiyanti, E. 2008. Studi variasi ukuran serbuk sari kembang sepatu (*Hibiscus rosa-sinensis* L.) dengan warna bunga berbeda. *Jurnal Biologi XII*. 1: 14–18.

Apriliani, A., Sukarsa, dan Hidayah, H.A. 2014. Kajian etnobotani tumbuhan sebagai bahan tambahan pangan secara tradisional oleh masyarakat di Kecamatan Pekuncen Kabupaten Banyumas. *Scripta Biologica*. 1(1): 76–84.

Aprilyanto, V dan Sembiring, L. 2015. *Filogenetika Molekuler*: *Teori dan Aplikasi.* Innosain, Yogyakarta.

Apsari, T. 2021. Hasil dan Mutu Buah Karika (*Vasconcellea pubescens* L.) pada Tiga Tinggi Tempat Berbeda di Dieng. *Skripsi*. Universitas Gadjah Mada, Yogyakarta.

Araújo, F.S., Carvalho, C.R., and Clarindo, W.R. 2010. Genome size, base composition and karyotype of *Carica papaya* L. *The Nucleus*. 53(1–2): 25–31

Arfa, N.N. Determinasi Jenis Kelamin pada Tanaman Salak (*Salacca zalacca* (Gaert.) Voss) dengan Sequence Characterized Amplified Regions. *Skripsi*. Universitas Gadjah Mada, Yogyakarta.

Aristya, G.R., Daryono, B.S., Handayani, N.S.N., dan Arisuryanti, T. 2015. *Karakterisasi Kromosom Tumbuhan dan Hewan*. Gadjah Mada University Press, Yogyakarta.

Aristya, V.E. dan Taryono. 2019. Pemuliaan tanaman partisipatif untuk meningkatkan peran varietas padi unggul dalam mendukung swasembada pangan nasional. *Agrinova: Journal of Agriaculture Innovation*. 2(1): 026–035.

Arisuryanti, T., Rahmawati, Kartina, A.K. 2007. Studi kromosom jeruk nipis (*Citrus aurantifolia* (Chritsm.) Swingle) dan jeruk purut (*Citrus hystrix* DC). *Berkala Ilmiah Biologi.* 6(2): 107–112.

Arsal, A.F. 2018. Genetika I: Arif Memahami Kehidupan. Makassar: Badan Penerbit Universitas Negeri Makassar.

Aryal, R. and Ming, R. 2014. Sex determination in flowering plants: papaya as a model system. *Plant Science*. 217–218: 56–62.

Ashari, S. 2002. On the Agronomy and Botany of Salak (*Salacca zalacca*). *PhD Thesis*. Wageningen University and Research, Waginengen.

Astiti, A. dan Utaminingsih. 2021. Morfologi Trikoma Mahkota dan Kelopak Bererapa Varietas Bunga Krisan (*Chrysanthemum morifolium* Ramat.). Al-Hayat: *Journal of Biology and Applied Biology*. 4(2):87–95.

Assauwab, M.H. 2021. Growth of morphology seedling papaya (*Carica papaya* L.) to lengthy variation soaking temperature and receptacle pre-germination. *Jurnal Pertanian Tropik*. 8(1): 67–72.

Atmanto I.S., Sumardiono, S., Pudjihastuti, I., Supriyo, E., dan Broto, W. 2015. Meningkatkan produktivitas manisan carica melalui pasteurisasi otomatis pada Usaha Kecil dan Menengah (UKM) Sunrise Sikunir Kabupaten Wonosobo. *Prosiding Seminar Nasional 4th Universitas Sebelas Maret Surakarta SME's Summit and Awards*. Pusat Studi Pendampingan Koperasi dan Usaha Mikro Kecil dan Menengah (UMKM) Lembaga Penelitian dan Pengabdian Masyarakat Universitas Sebelas Maret.

Aziz, I.R. 2019. Kromosom tumbuhan sebagai marka genetik. *Jurnal Teknosasins*. 13(2): 125–131.

Azurianti, Wulansari, R., Athallah, F.N.F., dan Prijono, S. 2022. Kajian hubungan hara tanah terhadap produktivitas tanaman teh produktif di Perkebunan Teh Pagar Alam, Sumatera Selatan. *Jurnal Tanah dan Sumberdaya Lahan.* 9(1): 153–161.

Backer, C.A. and Brink, R.C.B.V.D. 1963. *Flora of Java (Spermatophytes Only).* N.V.P. Noordhoff, Groningen.

Balbontín, C., Gaete-Eastman, C., Fuentes, L., Figueroa, C.R., Herrera, R., Manriquez, D., Latché, A., Pech, J.C., and Moya-León, M.A. 2010. VpAAT1, a gene encoding an alcohol acyltransferase, is involved in ester biosynthesis during ripening of mountain papaya fruit. *Journal of Agricultural and Food Chemistry*. 58(8): 5114–21.

Barnes, R.P., Fouquerel, E., Opresko, P.L., 2019. The impact of oxidative Deoxyribonucleic Acid (DNA) damage and stress on telomere homeostasis. *Mechanisms of Ageing and Development.* 177: 37–45.

Bass, H.W. and Birchler, J.A. 2011. *Plant cytogenetics: Genome structure and chromosome function* (*Vol.4*). Springer Science and Business Media, New York.

Basundari, F.R.A. 2016. Tinjauan penggunaan marka Deoxyribonucleic Acid (DNA) untuk seleksi ketahanan penyakit tanaman. *Buletin Agro-Infotek*. 2(1): 43–50.

Beck, C.B. 2005. *An Introduction to Plant Structure and Development: Plant Anatomy for The Twenty-First Century*. Cambridge University Press, New York.

Backer, C. A. and Brink, R.C.B.V.D. 1963. *Flora of Java* (*Spermatophytes Only*). N.V.P. Noordhoof, Groningen.

Badan Pengembangan dan Pembinaan Bahasa. 2016. *Determinasi*. (https://kbbi.kemdikbud.go.id/entri/determinasi). Diakses tanggal 14 Oktober 2021.

Becker, J. and Heun, M. 1995. Barley microsatellites: allele variation and mapping. *Plant Molecular Biology*. 27: 835–845.

Behera, N. 2019. Chapter 9 - Effects of Phenotypic Plasticity and Unpredictability of Selection Environment on Niche Separation and Species Divergence. *Handbook of Statistics*. Volume 40, pages 405-431.

Bermawie, N. 2005. *Karakterisasi Plasma Nuftah Tanaman: Buku Pedoman Pengelolaan Plasma Nuftah Perkebunan*. Pusat Penelitian dan Pengembangan Perkebunan, Bogor.

Bermawie, N., Ma'mun, Purwiyanti, S., dan Lukman, W. 2018. Pemilihan Pohon Induk Pala pada Koleksi Plasma Nutfah di Kebun Percobaan Cicurug Sukabumi. *Buletin Penelitian Tananaman Rempah dan Obat*. 29(1): 21–36.

Bernabeu-Wittel, M., Gómez-Díaz, R., González-Molina, Á., Vidal-Serrano, S., Díez-Manglano, J., Salgado, F., Soto-Martín, M., and Ollero-Baturone, M. 2020. On behalf of the proteo researchers. oxidative stress, telomere shortening, and apoptosis associated to sarcopenia and frailty in patients with multimorbidity. *Journal of Clinical Medicine.* 9(8): 2669.

Bernardi, G., Bucciarelli, G., Costagliola, D., Robertson, D.R., Heiser, J.B. 2004. Evolution of Coral Reef Fish *Thalassoma* spp. (Labridae). 1. Molecular phylogeny and Biogeography. *Marine Biology*. 144: 369-375.

Bhagyawant, S.S. 2016. RAPD-SCAR markers: an interface tool for authentication of traits. *Journal of Biosciences and Medicines***.** 04(01): 1–9.

Booth, N.K. 1983. *Basic Elements of Landscape Architecture Design.* Waveland Press Inc, Illinois.

Beukeboom, L.W. and Perrin, N., 2014. *The Evolution of Sex Determination.* Oxford University Press, Oxford.

Brecale, M., Caproli, E., Galli, M.G., Longo, C., Marziani-Longo, G., Rossi, G., Spada, A., Soave, C., Falavigna, A., Raffaldi, F., Maestri, E., Restivo, F.M., and Tassi, F. 1991. Sex determination and differentiation in *Aspargus officinalis* L. *Plant Science*. 80(1-2): 66–77.

Bryant B.R.E, Juli-Anne Gardner, J.A., Devitt, K.A. 2020. Educational Case: Cytogenetics. *Academic Pathology*. 7: 1–5.

Budiarto, B.R., Widyowati, H., Desriani. 2018. Kaitan *genotyping errors* dengan performa diagnostik molekuler kanker berbasis amplifikasi asam nukleat. *Biodidaktika: Jurnal Biologi dan Pembelajarannya*. 13: 1–18.

Budiyanti, T. 2016. Mengenal morfologi bunga untuk meningkatkan kualitas benih pepaya. *Iptek Holtikultura*. 12: 70–74.

CABI. 2019. '*Vasconcellea pubescens*'. CABI Compendium, Wallingford.

Caetano, C.M., Burbano, T.C.L., Sierra, C.L.S., Tique, C.A.P, and Nunes, D.G.C. 2008. Citogenética de espécies de *Vasconcellea* (Caricaceae). *Acta Agronômica.* 57: 241–245.

Campbell, N.A., Reece, J.B., Taylor, Martha, R. Simon, E.J., Dickey, J.L. 2008. *Biology: Concepts and Connections 6th Edition.* Benjamin Cummings, San

Carman, O., Alimuddin, Sastrawibawa, S., dan Arfah, H. 1997. Determinasi kromosom dan nukleoli kelamin pada ikan nila merah (*Oreochromis* sp.). *Zuriat.* 8(2): 83–89.

Carrasco, B., Arévalo, B., Perez-Diaz, R., Rodríguez-Alvarez, Y., Gebauer, M., Maldonado, J.E., García-Gonzáles, R., Chong-Pérez, B., Pico-Mendoza, J., and Meisel, L.A. 2022. Descriptive genomic analysis and sequence genotyping of the two papaya species (*Vasconcellea pubescens* and *Vasconcellea chilensis*) using GBS tools. *Plants*. 11(16): 2151.

Carvalho, C.G.P., Arias, C.A.A., Toledo, J.F.F., Almeida, L.A., Kiihl, R.A.S., Oliveira, M.F., Hiromoto, D.M. and Takeda, C. 2003. Proposta de classificação dos coeficientes de variação em relação à produtividade e altura da planta de soja. *Pesquisa Agropecuária Brasileira.* 38: 187–193.

Carvalho, F.A. 2013. Molecular phylogeny, biogeography, and an e-monograph of the papaya family (Caricaceae) as an example of taxonomy in the electronic age. *Dissertation.* Ludwig Maximilian University of Munich, Munich.

_____ and Renner, S., 2013. Correct names for some of the closest relatives of *Carica papaya*: a review of the Mexican/Guatemalan genera *Jarilla* and *Horovitzia*. *PhytoKeys.* 29: 63–74.

Cervantes, E. and Gómez. 2019. Seed shape description and quantification by comparison with geometric models. *Horticulturae*. 5(3): 60.

Charlesworth, D. 2002. Plant sex determination and sex chromosomes. *Heredity*. 88: 94–101.

_____. 2016. Plant sex chromosomes. *Annual Review of Plant Biology*. 67: 397-420.

Charlesworth, D. and Harkess, A. 2024. Why should we study plant sex chromosomes? *The Plant Cell*. 36(5): 1242–1256.

Chaturvedi, K., Bommisetty, P. Arpita Pattanaik, A., and Aswath, C. PCR detection assay for sex determination in papaya using SCAR marker. *Acta Botanica Croatica.* 73(2).

Chen, D., Wang, X., Zhang, J., and Zhang, Y. 2018. Anthocyanin biosynthesis and functions in plants. *Frontiers in Plant Science*. 9: 1113.

Chiarella, P., Capone,,P., and Sisto, R. 2023. Contribution of genetic polymorphisms in human health. *International Journal of Environmental Research and Public Health*. 20(2): 912.

Choi H.K., Kim, D., Uhm, T., Limpens, E., Lim H, Mun J.H., Kalo, P., Penmesta, R.V., Seres, A., Kulikova, O., Roe, B.A., Bisseling, T., Kiss, G.B., and Cook, D.R. 2004. A sequence-based genetic map of *Medicago truncatula* and comparison of marker colinearity with *M. sativa*. *Genetics*. 166: 1463–1502.

Choi, J.Y., Abdulkina, L.R., Yin, J., Chastukhina I.B., Lovell, J.T., Agabekian, I.A., Young, P.G., Razzaque, S., Shippen, D.E., Juenger, T.E., Shakirov, E.V., and Purugganan, M.D. 2021. Natural variation in plant telomere length is associated with flowering time. *Plant Cell*. 33(4): 1118–1134.

Cholidin dan Ariyanti, 2023. Anatomi Tumbuhan Pakan Gajah Sumatra (*Elephas maximus sumatranus* Temminck) di Taman Nasional Way Kambas. *Jurnal Ilmu Pertanian Indonesia*. 29(2): 187–195.

Chong-pérez, B., Herrera, F., Quiroz, K., and Garcia-gonzales, R. 2018. Regeneration of highland papaya (*Vasconcellea pubescens*) from anther culture. *Applications in Plant Sciences.* 6(9): 1–7.

Ciupercescu, D.D., Veuskens, J., Mouras, A, Ye, D., Briquet, M., and Negrutiu, I. 1990. Karyotyping *Melandrium album*, a dioecious plant with heteromorphic sex chromosomes. *Genome*. 33(4): 556–562.

Clark, M.S. and Wall, W.J. 1996. *Chromosomes, the complex code*. Chapman and Hall, London. p. 237–243.

Corrêa, D.J., Pereira, T.N., Neto, M.F., and Pereira, M.G. 2010. Meiotic behavior of *Carica papaya* and *Vasconcellea monoica*. *Caryologia*. 63: 229–236.

Costa, F.R., Pereira, T.N.S., Hodnett, G.L., Pereira, M.G., and Stelly, D.M. 2008. Fluorescent in situ hybridization of 18S and 5S rDNA in papaya (*Carica papaya* L.) and wild relatives. *Caryologia* 61: 411–416.

Crombé, P., Langohr, R., Perdaen, Y., Robinson, E., Sergant, J., Verhegge, J., and De Bie, M. 2021. From wild to domesticated: Transformations in the distribution and use of plant resources in Belgium during the Neolithic. *Vegetation History and Archaeobotany*. 30(4): 469–487.

Darjanto dan Satifah. 1990. *Pengetahuan Dasar Biologi Bunga dan Teknik Penyerbukan Silang Buatan*. Gramedia Pustaka Utama, Jakarta.

Darlington, C.D. and Ammal, E.K.J. 1945. *Chromosome Atlas of Cultivated Plants*. G. Allen and Unwin Ltd, London.

Darmawan, G. 2010. Karakterisasi Kromosom Tomat (*Lycopersicum esculentum* Mill) Varietas Berlian dan Varietas Intan. *Skripsi*. UIN Sunan Kalijaga, Yogyakarta.

Dasti, A.A., Bokhari, T.Z., Malik, S.A. and Akhtar, R. 2003. Epidermal morphology in some members of family Boraginaceae in Balochistan. *Asian Journal of Plant Sciences.* 2: 42–47.

da Silva, E.N., Neto, M.F., Pereira, T.N.S. 2012. Meiotic behavior of wild Caricaceae species potentially suitable for papaya improvement. *Crop Breeding and Applied Biotechnology*. 12: 52–59.

Datta. 1971. Chromosomal Biotypes of *Carica papaya* Linn. *Cytologia*. 36: 555-562.

Dauncey, E.A., Irving, J., Allkin, R., and Robinson, N. 2016. Common mistakes when using plant names and how to avoid them. *European Journal of Integrative Medicine*. 8(5): 597–601.

Dehgan, B. and Webster, G.L. 1979. Morphology and Intrageneric Relationships of the Genus *Jatropha* (Euphorbiaceae). *University of California Publications in Botany*. 74: 1–73.

Desmarchelier, C., Gurni, A, Ciccia, G., and Giulietti, A.M. 1996. Ritual and medicinal plants of the Ese'ejas of the Amazonian rainforest (Madre de Dios, Perú). *Journal of Ethnopharmacology*. 52(1): 45–51.

Dewi, V.P., Hindun, I., dan Wahyuni, S. 2015. Studi trikoma daun pada Famili Solanaceae sebagai sumber belajar biologi. *Jurnal Pendidikan Biologi Indonesia.* 1(2): 209–218.

Dharmayanti, N.L.P.I. 2011. Filogenetika molekuler: Metode taksonomi organisme berdasarkan sejarah evolusi. *Wartazoa*. 21: 1–10.

Diggle, P.K., Stilio V.S.D., Gschwend A.R., Golenberg E.M., Moore R.C., Russell J.R.W., Sinclair, J.P. 2011. Multiple developmental processes underlie sex differentiation in angiosperms. *Trends Genetics.* 27: 368-376.

Harkess A., Leebens-Mack, J. 2017. A Century of Sex Determination in Flowering Plants, *Journal of Heredity*. 108(1): 69–77.

Digilio, A.P.L., Legname, P.R. 1966. *Los árboles indígenas de la provincia de Tucumán.* Opera Lilloana 15: 20, 129 pp.

Dinas Pangan, Pertanian, dan Perikanan Kabupaten Wonosobo. 2018. *Luas Tanam dan Produktivitas Carica di Kecamatan Kejajar Tahun 2015 - 2017.* Dinas Pangan, Pertanian, dan Perikanan Kabupaten Wonosobo.

Divashuk, M.G., Alexandrov, O.S., Razumova, O.V., Kirov, I.V., and Karlov, G.I. 2014. Molecular cytogenetic characterization of the dioecious *Cannabis sativa* with an XY chromosome sex determination system. *PLoS One.* 9(1): e85118.

Doyle, J.J. and Doyle, J.L. 1987. A rapid DNA isolation procedure for small quantities of fresh leaf tissue. *Phytochemical Bulletin*. 19: 11–15.

_____. 1990. Isolation of plant DNA from fresh tissue. *Focus* 12: 13–15.

Ediwirman. 2015. Pengembangan Metode Penentuan Kelamin Secara Dini Berbasis Molekuler Pada Tanaman Salak *Dioecious*. *Disertasi*. Universitas Andalas, Padang

Effendi, Yunus. 2020. *Buku Ajar Genetika Dasar*. Pustaka Rumah C1nta, Magelang.

Elfianis, R., Warino, J., Rosmaina, Suherman, dan Zulfahmi. 2021. Analisis kekerabatan genetik tanaman padi (*Oryza sativa* L.) di Kabupaten Kampar dengan menggunakan penanda *Random Amplified Polymorphic DNA* (RAPD). *Jurnal Agroteknologi*. 11(2): 75–84.

Erdmant, G., 1952. *Pollen Morphology and Plant Taxonomy - Angiosperm: An Introduction to Palynology Volume I*. Almqvist and Wiksell, Stockholm.

Etikawati, N., Setyawan, A.D. 2000. Studi Sitotaksonomi pada Genus Zingiber. *Biodiversitas*. 1(1): 8–13.

Faatih, M. 2009. Isolasi dan digesti DNA kromosom. *Jurnal Penelitian Sains dan Teknologi*. 10(1): 61–67.

Fajkus, J., Kovarik, A., and Kralovics, R. 1996. Telomerase activity in plant cells. *FEBS Letters.* 391: 307–309.

Fajjrin, R.A. dan Affandi, F.Y. 2014. Produksi Bahan Pemanis dari Kulit Buah Carica (*Carica pubescens*) dengan Metode Hidrolisis Asam. *Skripsi.* Universitas Gadjah Mada, Yogyakarta.

Fatimah, S. dan Suryawati, S. 2015. Uji Kekerabatan antara salak jantan dan salak betina (*Salacca zalacca* (Gartner) Voss Bangkalan. *Agrovigor*. 8 (2): 39–45

Ferreira, M.C., Oliveira, M.A. 2018. Pollen morphology of mountain papaya (*Carica pubescens*). *Grana*. 57(4): 313-319.

Fitriningrum, R., Sugiyarto, S., dan Susilowati, A. 2013. Analisis kandungan karbohidrat pada berbagai tingkat kematangan buah karika (*Carica pubescens*) di Kejajar dan Sembungan, Dataran Tinggi Dieng, Jawa Tengah. *Bioteknologi*. 10(1): 6–14.

Folorunso, A. 2015. Inheritance of purple pigmentation in *Carica papaya* Linn. (Caricaceae). *International Journal of Plant Research.* 5(2): 27–33.

Foram, V., Pooja, K., Ram, V.R., and Dave, P.N. 2019. Sex determination in papaya: a mini review. *Progress in Chemical and Biochemical Research.* 2(4): 228–234.

Freeman, D.C., McArthur, E.D., Harper, K.T., and Blauer, A.C. 1981. Influence of Environment on the floral sex ratio of monoecious plants. *Evolution*. 35(1): 194–197.

Fulton, T.M., Chunwongse, J., Tanksley, S.D. 1995. Microprep protocol of extraction DNA from tomato and other herbaceous plants. *Plant Molecular Biology Reporter*. 13(3): 207–209.

Furumoto, K., Inoue, E., and Nagao, N. 1998. Age-dependent telomere shortening is slowed down by enrichment of intracellular vitamin C via suppression of oxidative stress. *Life Sciences.* 63: 935–948.

Gil, A.I. and Miranda. 2005. Morfología de la flor y de la semilla de papaya (*Carica papaya* L.): variedad Maradol e híbrido Tainung-1. *Agronomía Colombiana* 23(2): 217–222.

Gontha, G.L.A. dan Pratiwi, R. 2016. Pemurnian dan Optimasi Imobilisasi Papain Getah Buah Pepaya Gunung (*Vasconcellea pubescens* A.DC.). *Tesis*. Universitas Gadjah Mada, Yogyakarta.

Gosh, D., Chaudhary, N., Shanker, K., Kumar, B., Kumar, N. Monoecious *Cannabis sativa* L. discloses the organ-specific variation in glandular trichomes, cannabinoids content and antioxidant potential. *Journal of Applied Research on Medicinal and Aromatic Plants.* 35: 100476.

Gruber, H.J., Semeraro, M.D., Renner, W., and Herrmann, M. 2021. Telomeres and Age-Related Diseases. *Biomedicines*. 9(10): 1335.

Gschwend, A.R., Wai, C.M., Zee, F., Arumuganathan, A.K., and Ming, R. 2013. Genome size variation among sex types in dioecious and trioecious Caricaceae species. *Euphytica*. 189(3): 461–469.

Guerra, M.S. 1986. Reviewing the chromosome nomenclature of Levan *et al*. *Revista Brasileira de Genética.* 9: 741–743.

Gunarso, W. 1988. *Sitogenetika*. Bogor, Penerbitan Institut Pertanian Bogor, Bogor.

Guoju, X, Qiang, Z, Jiangtao, B, Fengju, Z, Chengke, L. 2020. The relationship between winter temperature rise and soil fertility properties. *Air, Soil, and Water Research*. 5(1): 15–22.

Gusmalawati, D., Huda, M.F., Fauziah, S.M., Banyo, Y.E., Abidin, Z. 2021. Karakterisasi morfologi polen dari sepuluh jenis tumbuhan dari famili yang berbeda. G-Tech Jurnal Teknologi Terapan. 4(2): 303-308.

Gusmiaty, Restu, M., Asrianny, dan Larekeng, S.H. 2016. Polimorfisme Penanda RAPD untuk Analisis Keragaman Genetik *Pinus merkusii* di Hutan Pendidikan Unhas. *Jurnal Natur Indonesia*. 16(2): 47-53.

Hadi, P.S. 2001. Identifikasi Kromosom dalam Penentuan Jenis Kelamin Tanaman Salak (*Salacca zalacca* (Gaertner) Voss. *Tesis*. Universitas Gadjah Mada, Yogyakarta (Tidak Dipublikasikan).

Hadi, P.S., Purwantoro, A., and Prajitno, J. 2002. Identifikasi Kromosom dalam Penentuan Jenis Kelamin Tanaman Salak (*Salacca zalacca* (Gaertner) Voss). *Agrosains*. 15(1): 31–46.

Hadiati, S., Susiloadi, A., dan Budiyanti T. 2008. Hasil persilangan dan pertumbuhan beberapa genotif salak. *Buletin Plasma Nutfah.* 14(1) : 26–32.

Hadisunarso. 2018. *Morfologi Tumbuhan (Edisi ke-2).* Penerbitan Universitas Terbuka, Tangerang.

Halbritter, H., Ulrich, S., Grímsson, F., Weber, M., Zetter, R., Hesse, M, Buchner, R., Svojtka, M., FroschRadivo, A. 2018. Illustrated Pollen Terminology (2nd Ed.). Cham, Switzerland: Springer Open.

Handoyo, L.D. 2018. *Determinasi Seks dan Rangkai Kelamin*. (https://www.slideshare.net/den_paijo/determinasi-seksdanrangkaikelamin-10508134). Diakses tanggal 14 Oktober 2021.

Hanum, L., Kasiamdari, R.S., Santosa, dan Rugayah. 2013. Karakter Makromorfologi dan Mikromorfologi Duku, Kokosan, Langsat dalam Penentuan Status Taksonomi pada Kategori Infraspesies. *Biospecies*. 6(2): 23–29.

Harisha, C.R. and Jani, S. 2013. *Pharmacognostical Study on Trichomes of Solanaceae and its Significance.* Institute for Postgraduate Teaching and Research in Ayurveda Gujarat Ayurved University, Jamnagar.

Harrison, I., Laverty, M., and Sterling, E. 2004. *Genetic Diversity. Connexions* module: m12158.

Hartati, S. Darsana, L., dan Cahyono, O. 2014. Studi karakterisasi anggrek secara sitologi dalam rangka pelestarian plasma nutfah. *Caraka Tani: Journal of Sustainable Agriculture.* 29(1): 25–30.

Hartwell, L., Hood, L., Goldberg, M., Reynolds, A., Silver, L. 2015. *Genetics from Genes to Genomes. Sixth Edition*. McGraw-Hill, New York.

Haryoto, K, Widowati, S., Sutrisno, S.D, dan Indrasari. 1998. *Membuat Saus Pepaya.* Kanisius, Jakarta.

Hasanah, F.T. 2020. Karakteristik wilayah daratan dan perairan di Indonesia. *Jurnal Geografi.* 20(13): 1–6.

Hastuti, D., Suranto, dan Setyono, P. 2009. Variation of morphology, karyotype and protein band pattern of adenium (*Adenium obesum*) varieties. *Nusantara Bioscience*. 1: 78–83.

Heacock, M., Spangler, E., Riha, K., Puizina, J., Shippen, D.E. 2004. Molecular analysis of telomere fusions in Arabidopsis: multiple pathways for chromosome end-joining. *EMBO Journal*. 23(11): 2304–13.

Heikrujam, M., Sharma, K., Prasad, M., and Agrawal, V. 2015. Review on different mechanisms of sex determination and sex-linked molecular markers in dioecious crops: a current update. *Euphytica*. 201(2): 161–194.

Heller, J. 1996. *Physic Nut, Jatropha curcas L. Promoting The Conservation and Use of Underutilized and Neglected Crops*. International Plant Genetic Resources Institute. 54 p.

Herliani dan Theodora. 2020. *Buku Ajar Morfologi Tumbuhan*. Universitas Mulawarman, Samarinda.

Hidayat, B.E. 1995. *Anatomi Tumbuhan Berbiji*. Penerbit ITB, Bandung.

Hidayat, S. 2001. Prospek Pepaya Gunung (*Carica pubescens*) dari Sikunang, Pegunungan Dieng, Wonosobo. *Prosiding Seminar Sehari: Menggali Potensi dan Meningkatkan Prospek Tanaman Hortikultura Menuju Ketahanan Pangan.* Pusat Konservasi Tumbuhan Kebun Raya Bogor-LIPI, Bogor.

Higgins, J.E. and Valentine, S.H. 1914. *The Papaya in Hawaii.* Hawaii Agricultural Experiment Station, Lewisburg.

Hikmatyar, M.F., Royani, J.I., Dasumiati. 2015. Isolasi dan amplifikasi DNA keladi tikus (*Thyponium flagelliform*) untuk identifikasi keragaman genetik. *Jurnal Bioteknologi dan Biosains Indonesia.* 2(2): 42–48.

Hoover, G.T. 2016. Broadening the genetic base of papaya via intergeneric hybridization with wild relatives. *Thesis*. University of Hawaii, Manoa.

Huang, T. 1972. *Pollen Flora of Taiwan*. National Taiwan University Botany Departement Press, Taipei.

Huda, I.N. dan Daryono, B.S. 2013. Analisis variasi genetik melon (*Cucumis melo* L.) kultivar gama melon basket dengan metode *Random Amplified Polymorphic DNA*. *Biogenesis: Jurnal Ilmiah Biologi*. 1(1): 41–50.

Ihsan, D.N. 2020. *Berasal dari Amerika Selatan, Ini Awal Mula Buah Carica Berada di Dieng*. (https://www.solopos.com/berasal-dari-amerika-selatan-ini-awal-mula-buah-carica-berada-di-dieng-1090628). Diakses pada 08 November 2021.

Ii, Y., Uragami, A., Uno, Y, Kanechi, M. and Inagaki, N. 2012. RAPD-based analysis of differences between male and female genotypes of *Asparagus officinalis*. *Horticultural Science.* 39: 33–37.

Immaniar, E.F. dan Pharmawati, M. 2014. Kerusakan kromosom bawang merah (*Allium cepa* L.) akibat perendaman dengan etidium bromida. *Jurnal Simbiosis*. 2(2): 173–183.

Indhirawati, R. 2018. Deteksi Panjang Telomer Tanaman Salak (*Salacca zalacca* Gart. Voss.) dan Pepaya (*Carica papaya* L.) pada Perbedaan Jenis Kelamin dan Perkembangan Daun dengan *Polymerase Chain Reaction*. *Thesis*. Universitas Gadjah Mada, Yogyakarta.

Indhirawati, R. and Purwantoro, A. 2018. Telomere length determination based on different sex and leaf development of snake fruit (*Salacca zalacca* Gaertn. Voss.) revealed by Polymerase Chain Reaction. *Ilmu Pertanian (Agricultural Science)*. 3(3): 146–152.

International Board for Plant Genetic Resources (IBPGR). 1988. *Descriptors for Papaya*. International Board for Plant Genetic Resources, Rome.

Intha, N. and Chaiprasart, P. 2018. Sex determination in date palm (*Phoenix dactylifera* L.) by PCR based marker analysis. *Scientia Horticulturae*. 236: 251–255.

Iovene, M., Yu, Q., Ming, R., Jiang, J. 2015. Evidence for emergence of sex-determining gene(s) in a centromeric region in *Vasconcellea parviflora*. *Genetics*. 199(2): 413–421.

Istiawan N.D. dan Kastono, D. 2019. Pengaruh ketinggian tempat tumbuh terhadap hasil dan kualitas minyak cengkeh (*Syzygium aromaticum* (L.) Merr. & Perry.) di Kecamatan Samigaluh, Kulon Progo. *Vegetalika*. 8(1): 27–41.

Istiningrum, R.B., Nurrokhmah, H., dan Wahyuni, A.S. 2018. Analisis komposisi biodiesel hasil konversi minyak biji carica (*Carica pubescens*) menggunakan

Integrated Taxonomy Information System (ITIS). *Vasconcellea pubescens* A.DC. (https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=896487#null). Retrieved July 21, 2021.

Jamsari. 2007. *Bioteknologi untuk Pemula: Prinsip Dasar dan Aplikasi Analisis Molekuler*. Universitas Riau Press, Pekanbaru.

Jamsari A., Nitz I., Reamon-Büttner S.M., and Jung, C. 2004. BAC-derived diagnostic markers for sex determination in *Asparagus*. *Theoretical and Applied Genetics*. 108: 1140–1146.

Jiménez, V.M., Mora-Newcomer, E., and Gutiérrez-Soto, M.V. 2014. *Chapter: Biology of The Papaya Plant. In Book: Genetics and Genomics of Papaya.* Ming, R., and Moore, P.H. (Eds). Springer, New York, 17–33 pp.

Jose, D., Nidhin, B., Kumar, K.P.A., Pradeep, P.J., Harikrishnan, M. 2015. A molecular approach towards the taxonomy of fresh water prawns *Macrobrachium striatum* and *M. equidens* (Decapoda, Palaemonidae) using mitochondrial markers. *Mitochondrial DNA*. 1-9.

Julismin. 2013. Dampak dan perubahan iklim di Indonesia. *Jurnal Geografi*. 5(1): 39–46.

Kaihatu, S., Pesireron, M., Ohorella, I., Senewe, R.E., Waas, E.D., and Gaffar, A. 2021. Effect of natural male and female (sex ratio) on nutmeg (*Myristica fragrans*) production on Maluku. *The First International Conference on Assessment and Development of Agricultural Innovation (1st ICADAI 2021).*

Kamus Besar Bahasa Indonesia dalam Jaringan, 2016. (https://kbbi.kemdikbud.go.id/entri/pepaya%20gunung). Diakses pada tanggal 30 November 2023.

Karamina, H., Fikrinda, W., dan Murti, A.T. 2017. Kompleksitas pengaruh temperatur dan kelembaban tanah terhadap nilai pH tanah di perkebunan jambu biji varietas kristal (*Psidium guajava* L.) Bumiaji, Kota Batu. *Jurnal Kultivasi*. 16 (3): 430–434.

Kartasapoetra, A.G. 1991. *Pengantar Anatomi Tumbuh-tumbuhan*. PT. Rineka Cipta, Jakarta.

Kartika, A.P. 2022. Pengaruh pH Tanah terhadap Tumbuh Kembang Tanaman. (https://www.lombokinsider.com/industry-news/pr-1555850972/pengaruh-ph-tanah-terhadap-tumbuh-kembang-tanaman). Diakses pada tanggal 1 Desember 2023.

Kasha, K., Hu, T.C., Oro, R., Simion, E., and Shim, Y.S. 2001. Nuclear fusion leads to chromosome doubling during mannitol pretreatment of barley (*Hordeum vulgare* L.) microspores. *Journal of Experimental Botany*. 52(359): 1227–1238.

Kemena, C., Notredame, C. 2009. Upcoming challenges for multiple sequence alignment methods in the highthroughtput era. *Bioinformatics*. 25: 2455–2465.

Kempler, C., Kabaluk, J.T., and Nelson, M. 1993. Green- house cultivation of babaco effect of media, container size, stem number, and plant density. *New Zealand Journal of Crop and Horticultural Science*. 21: 273–277.

Khotimah, K. 2016. Skrining Fitokimia dan Identifikasi Metabolit Sekunder Senyawa Karpain pada Ekstrak Metanol Daun *Carica pubescens* Lenne & K. Koch dengan LC/MS. *Skripsi*. UIN Maulana Malik Ibrahim, Malang.

Kilian, A., Stiff, C, and Kleinhofs, A. 1995. Barley telomeres shorten during differentiation but grow in callus culture. *Proceedings of the National Academy of Sciences of the United States of America*. 92: 9555–9559.

Kilian, A., K. Heller., A. Kleinhofs. 1998. Development patterns of telomerase activity in barley and maize. *Plant Molecular Biology.* 37: 621–628.

Korekar, G., Sharma, R.K., Kumar, R., Meenu, Bisht, N.C., Srivastava, R.B., Ahuja, P.S., and Stobdan, T. 2012. Identification and validation of sex-linked SCAR markers in dioecious *Hippophae rhamnoides* L. (Elaeagnaceae). *Biotechnology Letters*. 34(5): 973–978.

Koul, B., Baveesh, P., Sharma, C., Kumar, A., Sharma, V., Yadav, Jin, Jun-O. 2022. *Carica papaya* L.: A Tropical fruit with benefits beyond the tropics. *Diversity*. 14 (8): 1-31.

Kristanti, R.A. 2015. Pengaruh ekstrak buah *Carica pubescens* Lenne & K. Koch yang tumbuh di beberapa tempat di Indonesia terhadap penyembuhan luka mukosa rongga mulut. *el-Hayah*. 5(3): 123–127.

Kumar, S., Kumari, R., and Sharma, V. 2014. Genetics of dioecy and causal sex chromosomes in plants. *Journal of Genetics.* 93(1): 241–77.

Kumar, S., Singh, B.D., Sinha, D.P. and Rai, M. 2008. Sex expression-associated RAPD markers in pointed gourd (*Trichosanthes dioica*). *Proceedings of the IXth Eucarpia Meeting on Genetics and Breeding of Cucurbitaceae (Pitrat M, Ed)*, 543–550.

Kumar, S., Singh B.D., and Sinha, D.P. 2014. RAPD marker for identification of sex in point gourd (*Trichosanthes dioica* Roxb.). *Indian Journal Biotechnolgy*. 11: 251–256.

Kusdianti dan Meirandi, E.R. 2005. Tinjauan tentang bunga jarak (*Ricinus communis* Linn.). Jurusan Pendidikan Biologi Fakultas Pendidikan

Matematika dan Ilmu Pengetahuan Alam Universitas Pendidikan Indonesia, Bandung.

Kusnadi, K., Tivani, I., dan Amananti, W. 2016. Analisa kadar vitamin dan mineral buah karika Dieng (*Carica pubescens* Lenne) dengan menggunakan spektrofotometri UV-Vis dan AAS. *Parapemikir: Jurnal Ilmiah Farmasi*. 5(2): 81–87.

Kusumaatmadja, S. 1995. Sumbangan kearifan Tradisional terhadap Upaya Pelestarian Lingkungan Hidup : Sebuah Pengantar. *Jurnal Kebudayaan, Kearifan Tradisional, dan Pelestarian Lingkungan*. 24(6): 410–413.

Kruglyak, L. 1997. The use of a genetic map of biallelic markers in linkage studies. *Nature Genetics*. 17: 21–24.

Kyndt, T., Romeijn-Peeters, E., Van Droogenbroeck, B., Romero-Motochi, J.P., Gheysen, G., and Goetghebeur, P. 2005. Species relationships in the Genus *Vasconcellea* (Caricaceae) based on molecular and morphological evidence. *American Journal of Botany*. 92(6): 1033–1044.

Ladani, M.R. and Parabia, F.M. 2021. Preliminary Micro morphological and Macro morphological Studies of roots and stems of medicinally important varieties of *Shankhpushpi*. *Journal of Medicinal Plants Studies.* 9(3): 233–237

Labs, Genecraft. 2021. Epigenetik dan Perannya dalam Kehidupan. https://genecraftlabs.com/epigenetik/. Diakses pada 5 Mei 2024.

Laily, A.N. 2011. Karakterisasi *Carica pubescens* Lenne & K. Koch Berdasarkan Morfologi, Kapasitas Antioksidan, dan Pola Pita Protein di Dataran Tinggi Dieng. *Tesis*. Universitas Sebelas Maret, Surakarta.

_____, Suranto, and Sugiyarto. 2012. Characterization of *Carica pubescens* in Dieng Plateau, Central Java based on morphological characters, antioxidant capacity, and protein banding pattern. *Nusantara Bioscience*. 4(1): 16–21.

_____. dan Khoiri, A.N. 2016. Identifikasi Senyawa Antidiabetes secara *in Silico* pada *Carica pubescens* Lenne & K. Koch. *El-Hayah*. 5(4): 135–142.

_____, Alfiah, I., dan Khoiri, A.N. 2018. Karakterisasi *Carica pubescens* Lenne & K. Koch di Jawa Timur. *Prosiding Seminar Nasional Hayati*. 6(1): 64–78.

_____ and Setryorini, M. 2018. Analysis of The Trichomes Structure, Histochemistry, and Colouration Using Natural Dyes on *Carica pubescens* Lenne & K. Koch. *4th International Biology Conference* (IBOC).

Laily, A.N., Purnomo, Daryono, B.S., and Purwantoro, A. 2021. Local knowledge: Sex Determination on *Vasconcellea pubescens* A.DC. in Java, Indonesia. P*roceedings of the 1st International Conference on Education, Humanities, Health and Agriculture* (ICEHHA), 3–4 June 2021, Flores, Indonesia.

_____. 2023a. Plant Segregation and Pollen Characteristics of Highland Papaya (*Vasconcellea pubescens* A.DC.) Based on Sex Types. *SABRAO Journal Breeding and Genetics.* 55(4): 1170–1182.

_____. 2023b. Sex effect on the telomer length, elemental composition, and phytochemical content of highland papaya (*Vasconcellea pubescens* A.DC.) leaves. *Journal Breeding and Genetics.* 55(4): 1051–1064.

Laimeheriwa, B.M. 2018. *Sitogenetika dan Analisis Kromosom.* Universitas Pattimura, Ambon.

Lakkala, H., Ochoa, K., Ferreira-Aulu, M.B., Kaskinen, J., Quintero, C., Rodríguez, M.E., Trujillo, O., Nensthiel, C., and Vähäkari, N. 2020. *A scenario for the desirable future of the Colombian agri-food sector 2030 – focusing on andean native crops.* Writers and Finland Futures Research Centre, Turku.

Lee, MSY. 2004. Molekulerisasi Taksonomi. *Sistematika Invertebrata*. 18: 1-6.

Lestari, P., Kang, Y.J., Han, K.S., Gwag, J.G., Moon, J.K., Kim, Y.H., Lee, Y.H., Lee, S.H. 2014. Genome-wide single nucleotide polymorphism and validation in adzuki bean. *Molecular Breeding*. 33: 497–501.

Letelier, L., Gaete-Eastman, C., Peñailillo, P., Moya-León, M.A., and Herrera, R. 2020. Southern species from the biodiversity hotspot of central Chile: a source of color, aroma, and metabolites for global agriculture and food industry in a scenario of climate change. *Frontiers in Plant Science*. 11: 1002.

Levan, A., Fredga, K., and Sandberg, A.A. 1964. Nomenclature for centromeric position on chromosomes. *Hereditas*. 52(2): 127–251

Liang, J., Jiang, C., Peng, H., Shi, Q., Guo, X., Yuan, Y., and Huang, L. 2015. Analysis of the age of *Panax ginseng* based on telomere length and telomerase activity. *Scientific Reports*. 5: 79–85.

Liao, L., Liu, J., Dai, Y., Li, Q., Xie, M., Chen, Q., Yin, H., Qiu, G., and Liu, X. 2009. Development and application of SCAR markers for sex identification in the dioecious species *Ginkgo biloba* L. *Euphytica*. 169: 49–55.

Liao, Z., Yu, Q., and Ming, R. 2017. Development of male-specific markers and identification of sex reversal mutants in papaya. *Euphytica*. 213(2): 1–12.

Lin, Z., Zhou, P., Ma, X., Deng, Y., Liao, Z., Li, R., and Ming, R. 2020. Comparative analysis of chloroplast genomes in *Vasconcellea pubescens* A.DC. and *Carica papaya* L. *Scientific Reports*. 10(1): 1–12.

Liu, M., Stiller, J., and Holušová, K. 2016. Chromosome-specific sequencing reveals an extensive dispensable genome component in wheat. *Scientific Reports*. 6: 36398.

Liu, Y., Zhang, L., and Zhang, Y. 2015. Anthocyanins: biosynthesis, biological functions, and industrial applications. *Journal of Agricultural and Food Chemistry*. 63(39): 9554–9567.

Lorence, D. and Torres, R. 1988. *Carica cnidoscoloides* (sp. nov.) and sect. Holostigma (sect. nov.) of Caricaceae from Southern Mexico. *Systematic Botany*. 13(1):107–110.

Luhurningtyas, F.P., Dyahariesti, dan Eka S.F. 2020. Uji efek imunomodulator ekstrak biji karika (*Carica pubescens* Lenne K. Koch) terhadap peningkatan aktivitas fagositosis pada mencit putih swiss webster. *Pharmaceutical and Biomedical Sciences Journal*. 2(1): 27–34.

Lyons, D.M., Lauring, A.S. 2017. Evidence for the selective basis of transitionto-transversion substitution bias in two RNA viruses. *Molecular Biology and Evolution*. 34(12): 3205–3215.

Mareta, S., 2013. Studi morfologi serbuk sari beberapa varietas pepaya (*Carica papaya*). *Skripsi*. Universitas Negeri Padang, Padang.

Margineanu, A.M., Molnar, I., and Rakosy-Tican, E. 2014. Trichomes type analysis and their density in parental species *Solanum tuberosum* and *S. chacoense* and their derived somatic hybrids. *Biologie Vegetala.* 60(2): 33–42.

Mariza, G.R. 2021. Identifikasi Tipe Trikoma pada Daun Tumbuhan Famili Solanaceae Sebagai Referensi Mata Kuliah Anatomi Tumbuhan. *Skripsi*. Universitas Islam Negeri Ar-Raniry, Banda Aceh.

Martiasih, M. 2014. Aktivitas Antibakteri Ekstrak Biji Pepaya (*Carica papaya* L.) Terhadap *E. coli* dan *S. pyogenes*. *Skripsi*. Universitas Atma Jaya, Yogyakarta

Mayoru, S., Jufri W.A., Usman, N. 2022. Karakteristik Morfologi Tumbuhan Daun Majemuk. *Journal of Biology Science and Education*. 2(2): 107–114.

McGregor, H.C. and Varley, J.M. 1983. *Working With Animal Chromosome*. Jhon Wiley and Son, New York.

Meneely, P., Hoang, R.D., Okeke, I.N., Heston, K. 2017. *Genes, genomes, and evolution*. Oxford University Press, Oxford.

Metcalfe, C.R., Chalk, L.C. 1950. *Anatomy of the Dicotyledons*. Editora Clarendon Press, Oxford, 1145-1156.

Meza, S.D., Osorio, K., and Lagos, T. 2011. Evaluación de crecimiento, la morfología floral y el fruto de Chilacuán (*Vasconcellea cundinamarcensis* B.). *Revista de Ciencias Agrícolas*. 28: 9–23.

Mezzasalma, M. 2024. First cytogenetic analysis of *Hemidactylus mercatorius* Gray, 1842 provides insights on interspecific chromosomal diversification in the Genus *Hemidactylus* (Squamata: Gekkonidae). *Life* 14(2): 181.

Min, H.G., Ma, H.T., Liang GH. 1984. *Studies of Genetics.* The MacMillan Company, New York.

Minarno, E.B. 2016. Analisis kandungan saponin pada daun dan tangkai daun *Carica pubescens* Lenne & K. Koch. *El-Hayah*. 5(4): 143–152.

Ming, R., Van Droogenbroeck, B., Moore, P.H., Zee, F.T., Kyndt, T., Scheldeman, X., Sekioka, T., and Gheysen, G. 2005. Molecular diversity of *Carica papaya* and related species. *Plant Genome: Biodiversity and Evolution*. Sharma AK (ed.) Sharma A (ed.), 1: 229–254.

Modi, A., Suthar, K., Thakkar, P., Mankad, M.C., Kumari, S., Narayanan, S., Singh, A.S., Kumar, N. 2018. Evaluation of sex specific RAPD and SCAR markers linked to papaya (*Carica papaya* L.). *Biocatalysis and Agricultural Biotechnology.* 16: 271–276.

Mondini, L., Noorani, A., and Pagnotta, M.A. 2009. Assessing plant genetic diversity by molecular tools. *Diversity*. 1: 19–35.

Montalvão, A.P.L., Kersten, B., Fladung, M., and Müller, N.A. 2021. The diversity and dynamics of sex determination in dioecious plants. *Frontiers in Plant Science.* 11: 580488.

Morshidi, M. 1996. Genetic variability in *Carica papaya* and related species. *Dissertation*. University of Hawaii, Manoa.

Mu, Y., Ren, L., Xun, Z., Zhang, D., Song, H., Lu, H., Li, F., and Liu, D. 2014. Sex- and season-dependent differences in telomere length and telomerase activity in the leaves of ash and willow. *SpringerPlus*. 3: 163.

Muhamad, F.N., Ahmad, R.B., Asi, S.M., Murad, N.M. 2015. Reducing the search space and time complexity of Needleman-Wunsch algorithm (Global alignment) and smith-waterman algorithm (local alignment) for DNA sequence alignment. *Jurnal Teknologi*. 77(20): 137–146.

Muhlisyah, N., Muthiadin, C., Wahidah, B.F. Aziz, I.R. 2014. Preparasi kromosom fase mitosis markisa ungu (*Passiflora edulis*) varietas edulis Sulawesi Selatan. *Biogenesis*. 2(1): 48–55.

Muhuria, L. 1996. Analisis Kromosom untuk Penentuan Jenis Kelamin Tanaman Pala. *Tesis*. Universitas Gadjah Mada, Yogyakarta.

Mujahidillah, Tohir, Z.A.T., Dudi. 2015. Pola Percabangan Cabang Batang Primer dan Kaitannya dengan Zat Pengatur Tumbuh Tanaman Jarak Pagar (*Jatropha curcas*) *Trimonoecious*. *Thesis*. Institut Pertanian Bogor, Bogor.

Mulyani, S. 2006. *Anatomi Tumbuhan*. Kanisius, Yogyakarta.

Munné-Bosch, S. 2015. Sex ratios in dioecious plants in the framework of global change. *Environmental and Experimental Botany*. 109: 99–102.

Muñoz, M. 1988. Nomenclatura del papayo cultivado en Chile. *Agricultura Técnica* 48: 39–42.

Munsell Color (Firm). 2010. *Munsell soil color charts : with genuine Munsell color chips*. Grand Rapids, Michigan.

Musaad, I., Tubur, H.W., Wibowo, K., dan Santoso, B. 2017. *Pala Fakfak: Potensi, Agro Biofisik, Nilai Ekonomi, dan Pengembangannya*. Alfabeta, Bandung.

Mustofa, M.S. 2015. Pemendekan telomer pada penderita diabetes melitus. *Jurnal Kedokteran Yarsi*. 23 (3): 197-211.

Na, M.K., Bae, K.H., Kang, S.S., Min, B.S., Yoo, J.K., Kamiryo, Y., Senoo, Y., Yokoo, S., and Miwa, N. 2004. Cytoprotective effect on oxidative stress and inhibitory effect on cellular aging of *Terminalia chebula* fruit. *Phytotherapy Research.* 18: 737–741.

Naisumu, M.F., Sunimbar, Manek, A.H. 2022. Pengaruh tingkat produktivitas hasil tani padi terhadap kondisi ekonomi di Desa Benu Kecamatan Takari Kabupaten Kupang. *Jurnal Geografi*. 18(2): 142–152.

Nei, M. 2013. *Brenner's Encyclopedia of Genetics* (*Second Edition*)*: Genetic Distance*. Academic Press, San Diego. Page 248-250.

Nidyasari, R.S., Akmal, H., dan Ariyanti, N.S. 2018. Karakterisasi Morfologi dan Anatomi Tanaman Manggis dan Kerabatnya (*Garcinia* spp.) di Taman Buah Mekarsari. *Jurnal Sumberdaya Hayati*. 4(1): 12–20.

Ningsih, H. 2011. Studi Kromosom Tanaman Mata Kucing (*Dimocarpus malesianus* Leenh.) aalam Upaya Peningkatan Kualitas Buah. *Skripsi*. Universitas Sebelas Maret, Surakarta.

Nishimwe, G., Kosgei, J.C., Okoth, E.M., Asudi, G.O., and Rimberia, F.K. 2019. Evaluation of the morphological and quality characteristics of new papaya hybrid lines in Kenya. *African Journal of Biotechnology.* 18(2): 58–67.

Nitta, K., A.Y. Akiko and Tetsukazu, Y. 2010. Variation of flower opening and closing times in F1 and F2 hybrids of daylily (*Hemerocallis fulva*; Hemerocallidaceae) and nightlily (*H. citrine*). *American Journal of Botany*. 97(20): 261–267.

Noflindawati, N., Anwar, A., Yusniwati, Y., Sutanto, A. 2019. Karakter morfologi dan sitologi bunga pepaya merah delima. *Jurnal Biologi Universitas Andalas.* 7(1): 21.

Noflindawati, N.F.N., Anwar, A., Sutanto, A., dan Yusniwati, N. 2020. Seleksi marka SCAR untuk identifikasi dini jenis kelamin tanaman pepaya. *Jurnal Hortikultura*. 30(1): 1.

Novalina, D. 2013. Aktivitas Antibakteri Ekstrak Daun *Carica pubescens* dari Dataran Tinggi Dieng terhadap Bakteri Penyebab Penyakit Diare. *Tesis*. Universitas Sebelas Maret, Surakarta.

Novel, S.S., Nuswantara, S., Syarif, S. 2010. *Genetika Laboratorium*. Jakarta: Trans Info Media.

Nurhayati, B. dan Darmawati, S. 2017. *Biologi Sel dan Molekuler*. Pendidikan Sumber Daya Manusia Kesehatan, Jakarta Selatan.

O‟Neill, S.D. and Roberts, J. 2002. *Plant Reproduction.* Sheffield Academic Press.

O'Connor, C. 2008. Chromosome Mapping: Idiograms. *Nature Education*. 1(1): 107.

Organisation for Economic Co-operation and Development (OECD). 2006, “Section 10 - Papaya (*Carica papaya*)”, in Safety Assessment of Transgenic Organisms, Volume 1: OECD Consensus Documents, OECD Publishing, Paris.

Pai, A.C. 1987. *Dasar-Dasar Genetika*. Terjermahan Muhidin Apandi. Edisi Kedua. Erlangga, Jakarta, hal. 44.

Pannel, J.R. 2017. Plant sex determination. *Current Biology*. 27(5): 191-197.

Paran, I., Michelmore, R.W. 1993. Development of reliable PCR-based markers linked to downy mildew resistance genes in lettuce. *Theoretical and Applied Genetics.* 85: 985–993.

Parasnis A.S., Gupta, V.S., Tamhankar, S.A., and Ranjekar, P.K. 2000. A highly reliable sex diagnostic PCR assay for mass screening of papaya seedlings. *Molecular Breeding.* 6: 337–334.

Parés-Martínez, J., Linárez, R., Arizaleta, M., and Meléndez, L. 2004. Aspectos de la biología floral en lechosa (*Carica papaya* L.) cv. «Cartagena roja», en el estado Lara, Venezuela. *Caracas*, 21(1): 116–125.

Parjanto, Purwantoro, A., Artama, W.T. 2006. Analisis kromosom untuk penentuan kelamin tanaman salak. *Agrivita*. 28(1): 35–44.

Parjanto, Moeljopawiro, S., Artama, W.T., dan Purwantoro, A. 2003. *Kariotipe* kromosom salak. *Zuriat*. 14(2): 21–28.

Pathak, I., and Bordoni, B. 2023. *Genetics, Chromosomes*. StatPearls Publishing, Treasure Island.

Pedro, C.D.C., da Costa, F.R., Pereira, T.N.S., Neto, M.F., and Pereira, M.G. 2009. Karyotype determination in three Caricaceae species emphasizing the cultivated form (*C. papaya* L.). *Caryologia*. 62(1): 10–1.

Pereira, T.N.S., Neto, M. F., Damasceno, P.C., Da Costa Rabelo, F., and Pereira, M.G. 2014. Genetic relationship between *Vasconcellea* and *Carica* based on their chromosome features. *Cytologia*. 79(4): 567–573.

Perkasa, P. 2019. Penggunaan global positioning system (GPS) untuk dasar survey pada mahasiswa. *Jurnal Pendidikan Teknologi dan Kejuruan Balanga*. 7(1): 22–33.

Permatasari, A., and Hailu, H.W. 2015. Transplantation of carica (*Vasconcellea pubescens*) at various altitudes of Mount Lawu, Central Java with treatment of shade and different types of fertilizers. *Nusantara Bioscience*. 7(1): 6–14.

Phuangrat, B., Phironrit, N., Son-ong, A., Puangchon, P., Meechai, A., Waseem, S., Kositratana, W., Burns, P. 2013. Histological and morphological studies of pollen grains from elongate, reduced elongate and staminate flowers in *Carica papaya* L. *Tropical Plant Biology*. 6: 210- 216.

Pradani, R.A. 2022. Variasi bahasa Jawa dialek Muria dan dialek Kedu: kajian linguistik komparatif. *Prosiding Seminar Nasional Sastra, Pedagogik, dan Bahasa*. 4(1).

Prakash, J., Soni, A, Singh, P. 2018. Sex differentiation in papaya (*Carica papaya* L.): a review. *Indian Agricultural Research Institute*. 50(1-2): 47-54.

Purwaningsih, E. 2014. Pemendekan telomer dan apoptosis. *Jurnal Kedokteran Yarsi*. 22(2): 132–141.

Purwantara, S. 2015. Studi temperatur udara terkini di wilayah di Jawa Tengah dan DIY. *Geomedia*. 13(1): 41–52

Purwiyanti, S., Wahyu, Y., Rostiana, O. and Sudarsono. 2020. Correlation between morphological characters and the sex phenotypes of *Myristica fragrans* Houtt Trees. *IOP Conference Series: Earth and Environmental Science*.

Purwiyanti, S., Wahyu, Y., Rostiana, O., and Sudarsono. 2020. Correlation between morphological characters and the sex phenotypes of *Myristica fragrans* Houtt Trees. *IOP Conference Series: Earth and Environmental Science*. 418: 012033.

Pusat Perlindungan Varietas Tanaman. 2006. Panduan Pengujian Individual: Kebaruan, Keunikan, Keseragaman dan Kestabilan Pepaya (*Carica papaya* L.). Pusat Perlindungan Varietas Tanaman Departemen Pertanian RI.

Puspaningrum, M.R. 2008. Holocene Environmental Change Interpreted Based on Pollen Records of Air Pacah, West Sumatra. *Final Project Report*. Bandung: Biology Program School of Life Sciences and Technology.

Putri, I.I.S., Yuniastuti, E., Parjanto. 2022. The rambutan (*Nephelium lappaceum* L.) chromosomes. *Biodiversitas*. 23(4): 2196–2202.

Putro, S. dan Hayati, R. 2007. Dampak perkembangan permukiman terhadap perluasan banjir genangan di Kota Semarang. *Jurnal Geografi*. 4(1): 35-43.

Qandhi. 2012. *Pentingnya Kearifan Lokal Masyarakat dalam Pengelolaan Sumberdaya Alam dan Lingkungan di Pedesaan*. (https://fikafatiaqandhi.wordpress.com/2012/05/07/pentingnya-kearifan-lokal- masyarakat-dalam-pengelolaan-sumberdaya-alam-dan-lingkungan-di-pedesaan/). Diakses tanggal 19 Oktober 2021.

Qassampedia. 2018. Substansi Genetik. https://www.qassampedia.com/2018/03/substansi-genetik.html diakses tanggal 4 November 2021

Qodriyyah, T.N., Suedy S.W.A., Haryanti, S. 2015. Morfoanatomi polen flora mangrove di Pantai Banjir Kanal Timur, Semarang. *Jurnal Akademika Biologi*. 4(3): 23-30.

Rahayu, E.S., Habibah, N.A., and Herlina, L. 2015. Development of in vitro conservation medium of *Carica pubescens* Lenne & K. Koch through nutrients concentration reduction and osmoregulator addition. *Biosaintifika: Journal of Biology and Biology Education.* 7(1): 29–36.

_____ and Habibah, N.A. 2016. Optimization of in vitro conservation protocol of *Carica pubescens* Lenne & K. Koch through medium concentration, temperature and irradiation duration decrease. *Biosaintifika: Journal of Biology and Biology Education*. 8(1): 85.

_____, Sulisetijono, S., and Lestari, U. 2019. Phytochemical screening, antioxidant activity, and total phenol profile of *Carica pubescens* leaves from Cangar, Batu-East Java, Indonesia. *IOP Conference Series: Earth and Environmental Science*. 276(1): 1–7.

_____, Sulisetijono, S., dan Lestari, U. 2020. *Potensi Daun Pepaya Carica pubescens dan Pengaruhnya terhadap Serangga Hama*. FMIPA Universitas Negeri Malang.

Ramadani, D. 2018. Pengaruh Pemberian Salep Getah Pepaya Muda (*Carica papaya* L) terhadap Penyembuhan Luka Sayat pada Mencit (*Mus musculus*) dan Implementasinya Sebagai Bahan Pembelajaran Bagi Masyarakat. *Skripsi*. Universitas Muhammadiyah Surabaya, Surabaya.

Ramirez, R., Carracedo, J., and Jimenez. 2003. Massive Telomere loss is an early event of DNA damage-induced apoptosis. *Journal of Biological Chemistry*. 272: 836–842.

Rasyid, M., Irawati M.H., Saptasari, M. 2017. Anatomi Daun *Ficus racemosa* L. (Biraeng) dan Potensinya di Taman Nasional Bantimurung Bulusaraung. *Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan*. 2(6): 861–866.

Raseena, N.R., Beevy, S.S. 2018. morphology, structure and distribution of floral trichomes in *Coccinia grandis* (L.) Voigt. (Cucurbitaceae). *International Journal of Agriculture Environment and Biotechnology*. 11(3): 503–511.

Rastono, A., Sugiyarto, dan Marsusi, 2018. Pertumbuhan dan produktivitas lahan carica (*Carica pubescens*) dalam pola tanam tumpangsari dengan stroberi (*Fragaria vesca*) dan loncang (*Allium fistulosum* L.) di lereng Gunung Lawu. *Ilmiah.* 12(9): 445–450.

Reflinur, Ma'sumah, Arfa, N.N., Daryono, B.S., and Nataawijaya, A. 2022. Improvement of sex determination of salak plants using sequence characterized amplified regions. *AIP Conference Proceedings.* 2462(1): 030010.

Reiger, J.E. 2009. Genetic and morphological diversity of natural populations of *Carica papaya*. *Thesis.* Miami University, Oxford.

Rescalvo-Morales, A., Monja-Mio, K.M., and Herrera-Herrera, G., 2016. Analysis of telomere length during the organogenesis induction of *Agave fourcroydes* Lem and *Agave tequilana* Weber. *Plant Cell, Tissue and Organ Culture.* 127: 135–143.

Reynolds, T.L., and Raghavan, V. 1982. An autoradiographic study of RNA synthesis during maturation and germination of pollen grains of *Hyoscyamus niger*. *Protoplasma.* 111: 177–188.

Riha, K., Fajkus, J., Siroky, J. and Vyskot, B. 1998. Developmental control of telomere lengths and telomerase activity in plants. *The Plant Cell*. 10: 1691–1698.

Rindyastuti, R. dan Daryono, B.S. 2009. Identifikasi papasan (*Coccinia grandis* (L.) Voigt) di tiga populasi di Yogyakarta. *Jurnal Biologi Indonesia*. 6(1): 131–142.

Rockinger, A., Sousa, A., Carvalho, F.A., and Renner, S.S. 2016. Chromosome number reduction in the sister clade of *Carica papaya* with concomitant genome size doubling. *American Journal of Botany.* 103(6): 1082–8.

Rohadi, Karmanah, Maslahat, M. 2022. Karakteristik dan kandungan minyak atsiri daun pala sebagai pembeda jenis kelamin tanaman. *The 5th Conference on Innovation and Application of Science and Technology* (CIASTECH 2022).

Ruiz, A.I., Guantay, M.E., Mercado, M.I., and Ponessa, G.I. 2013. Leaf morpho-anatomy and foliar architecture of *Carica quercifolia* (Caricaceae). *Lilloa*. 50(2): 82–92.

Russell, P.J. 2000. *Fundamentals of Genetics (2nd Edition)*. Addison Wesley Longman, London.

Salvatierra-González, M.A., and Jana-Ayala, C. 2016. Floral expression and pollen germination ability in productive mountain papaya (*Vasconcellea pubescens* A.DC.) orchards. *Chilean Journal of Agricultural Research*. 76(2): 136–142.

Sambrook, J. and Russell, D.W. 2001. *Molecular Cloning, A Laboratory Manual*. 3rd edition. Cold Spring Harbor Laboratory Press, New York.

Sangakkara, U.R. 1995. Influence of seed ripeness, sarcotesta, drying and storage on germinability of papaya (*Carica papaya* L.) seed. *Pertanika Journal Tropical Agriculture.* 18: 193–199.

Saputri, D., Putri N.A., Muhlisa. 2023. Studi Anatomi Trikoma Daun pada Famili Cucurbitaceae. Prosiding Seminar Nasional Biologi FMIPA Universitas Negeri Makassar. 629–636.

Saran, P.L., Solanki, I.S., and Choudhary, R. 2015. *Papaya: Biology, Cultivation, Production and Uses (1st ed.).* CRC Press, Boca Raton.

Sarasmiyarti, A. 2008. Analisis Sitogenetika Tanaman Manggis (*Garcinia mangostana* L.) Jogorogo. *Skripsi*. Universitas Sebelas Maret, Surakarta.

Saretzki G and Von Zglinicki T. 2002. Replicative aging, telomeres, and oxidative stress. *Annals of the New York Academy of Sciences.* 959: 24–9.

Sari, N., Rahayu, E.S., and Sumadi 2014. Optimasi jenis dan konsentrasi ZPT dalam induksi kalus embriogenik dan regenerasi menjadi planlet pada *Carica pubescens* Lenne & K. Koch. *Biosaintifika: Journal of Biology and Biology Education.* 6(1): 51–59.

Sarosa, M. 2008. Teknik Pemotongan Citra Kromosom Tumpang Tindih atau Bersentuhan. *Seminar Nasional Aplikasi Teknologi Informasi*, Yogyakarta.

Sasongko, H. dan Sugiyarto, S. 2018. Pengaruh pemberian ekstrak daun karika *(Vasconcellea pubescens* A.DC.) terhadap nilai SGPT dan SGOT pada tikus

jantan yang diinduksi parasetamol. *Journal of Pharmaceutical Science and Clinical Research*. 3(2): 70.

Sasongko, H., Efendi, N.R., and Sugiyarto. 2018. The ethanolic extract of mountain papaya (*Vasconcellea pubescens* A.DC.) fruit against lipid peroxidation of rat liver tissues. *AIP Conference Proceedings*.

Sasongko, H., Farida, Y., Efendi, R., Pratiwi, D., Setyawan, A.D., and Widiyani, T. 2016. Analgesic activity of ethanolic extracts of karika leaves (*Carica pubescens*) in vivo. *Journal of Pharmaceutical Science and Clinical Research.* 01(02): 83–89.

Savita, D.R.A. dan Widodo. 2022. Karakter Morfologi *Carica pubescens* dari Dataran Tinggi Dieng. *Jurnal Tropika Mozaika*. 2(1): 47–53.

Scheldeman, X., Willemen, L., Coppens D'Eeckenbrugge, G., Romeijn-Peeters, E., Restrepo, M. T., Romero Motoche, J., Jiménez, D., Lobo, M., Medina, C. I., Reyes, C., Rodríguez, D., Ocampo, J. A., Van Damme, P., and Goetgebeur, P. 2007. Distribution, diversity and environmental adaptation of highland papayas (*Vasconcellea* spp.) in tropical and subtropical America. *Biodiversity and Conservation*. 16(6): 1867–1884.

Scheldeman, X., Kyndt, T., Coppens d'Eeckenbrugge, G., Ming, R., Drew, R., Van Droogenbroeck, B., Van Damme, P., and Moore, P.H. 2011. *Vasconcellea*. In C. Kole (Ed.), *Wild crop relatives : genomic and breeding resources : tropical and subtropical fruits*, 213–249 pp.

Session, S.K. 1996. *Chromosomes: Molecular Cytogenetics*. In Hillis, D.M., C. Moritz, and B.K. Mable. Molecular Systematics. Second Edition. Sinauer Associates, Inc-Sunderland, Massachusetts. 152 p.

Setyawan, A.D. dan Sutikno. 2000. Kariotipe kromosom pada *Allium sativum* L. (bawang putih) dan *Pisum sativum* L. (kacang kapri). *BioSmart*. 2(1): 20–27.

Shammas, M.A., Koley, H., Beer, D.G., Li, C., Goyal, A.K., and Munshi. 2004. Growth Arrest, Apoptosis, and Telomere Shortening of Barrett's Associated Adenocarcinoma Cells by a Telomerase Inhibitor. *Gastroenterology*. 126: 1337–1346.

Silitonga, J. 2019. Pengaruh Pemberian Berbagai Konsentrasi Ekstrak Bawang Meah dan Lama Perendaman Stek Tanaman Jambu Air Madu Varietas Deli Hijau (*Syzygium aqueum*). *Skripsi*. Universitas Islam Riau, Pekanbaru.

Simirgiotis, M. J., Caligari, P.D.S., and Schmeda-Hirschmann, G. 2009. Identification of phenolic compounds from the fruits of the mountain papaya *Vasconcellea pubescens* A. DC. grown in Chile by liquid chromatography-UV detection-mass spectrometry. *Food Chemistry*. 115(2): 775–784.

Singh, R.J. 2003. *Plant Cytogenetics second edition*. CRC Press LLC, Boca Raton.

Sinnott, E.W. 1959. *Biographical Memoirs.* National Academy of Sciences University Press, New York.

Sobir, Sujiprihati, S., and Pandia, E.C. 2008. Development of SCAR marker for detection of sex expression in papaya (*Carica papaya* L.) from several genetic backgrounds. *Indonesian Journal of Agronomy*. 36(3): 236–240.

Soekarman dan Riswan, S. 1992. Status Pengetahuan Etnobotani di Indonesia. *Prosiding Seminar dan Lokakarya Nasional Etnobotani*.

Solliman, M.E., Mohasseb H.A.A, Al-Khateeb, A.A., Al-Khateeb, S.A., Chowdhury, K., El-Shemy, H.A., Aldaej, M.I. 2019. Identification and sequencing of Date-SRY Gene: A novel tool for sex determination of date palm (*Phoenix dactylifera* L.). *Saudi Journal of Biological Sciences.* 26(3): 514–523.

Song, H., Liu, D., Chen, X., Ying, Z., Zhang, B., Li, F., and Lu, H. 2010. Change of season-specific telomere lengths in *Ginkgo biloba* L. *Molecular Biology Reports.* 37: 819–824.

Stewart, F.A. 2012. The evolution of shelter: ecology and ethology of chimpanzee nest building. *Dissertation*. University of Cambridge, Cambridge.

Sudarmono dan Sahromi. 2012. Pollen atau serbuk sari : aspek morfologi, sistematika dan aplikasinya pada tumbuhan keluarga mentol. *Sains Natural.* 2(1): 12–16

Sujadi, Supena, N., Faizah, R., Lubis, M.I., dan Purba, A.R. 2017. *Kemunculan Bunga pada 8 Varietas Kelapa Sawit di Kebun Demblok.* Pusat Penelitian Kelapa Sawit (PPKS), Medan.

Suliartini N.W.S., Purwantoro, A., dan Sulistyaningsih, E. 2004. Keragaman Genetik dalam Spesies *Caladium bicolor* Berdasarkan Analisis Kariotipe. *Agrosains*. 17(2): 235–244.

Sulistyono, Purbaningsih, S., and Pujoarianto, A. 2000. Ultrastruktur pollinia pada 10 spesies anggrek dalam substribus Aeridinae (Orchidaceae). *Jurnal Mikroskopi dan Mikroanalisis*. 3(1).

Suminah, Sutarno, dan Setyawan A.D. 2002. Induksi poliploidi bawang merah (*Allium ascalonicum* L.) dengan pemberian kolkisin. *Biodiversitas*. 3(1): 174–180.

Supriadi, H, Randriani, E., Juliaty, T. 2015. Korelasi antara ketinggian tempat, sifat kimia tanah, dan mutu fisik biji kopi arabika di dataran tinggi garut. *Jurnal Tanaman Industri dan Penyegar.* 3(1): 45–52.

Suprihati, D., Elimasni, E. dan Sabri. 2007. Identifikasi kariotipe terung belanda (*Solanum betaceum* Cav.) kultivar Brastagi Sumatera Utara. *Jurnal Biologi Sumatera Utara*. 2(1): 7–11.

Sutopo, H. 2006. *Morfologi Tumbuhan*. Kanisius, Yogyakarta.

Swamy, B.G.L. and Krishnamurthy, K.V. 1980. *Form Flower to Fruit (Embryology of Flowering Plant)*. Tata Mc.Graw-Hill, New Delhi.

Syafaruddin. 2011. Efektivitas dan efisiensi teknik isolasi dan purifikasi DNA pada jambu mete. *Jurnal Tanaman Industri dan Penyegar.* 2(2): 151–160.

Sybenga, J. 1959. Some sources of error in the determination of chromosome length. *Chromosoma*. 10: 355–364.

_____. 1992. *Cytogenetics in Genetics and Plant Breeding. In: Cytogenetics in Plant Breeding*. Monographs on Theoretical and Applied Genetics, Vol 17. Springer, Berlin, Heidelberg.

Tamaki, M., Urasaki, N., Sunakawa, Y., Motomura, K., and Adania, S.A. 2011. Seasonal variations in pollen germination ability, reproductive function of pistils, and seeds and fruit yield in papaya (*Carica papaya* L.) in Okinawa. *Journal Japanese Society Horticultural Science.* 80 (2): 156–163.

Tamarin, R.H. 1999. *Principle of Genetics, Sixth edition*. McGraw-Hill Companies, New York.

Tamura, K., Nei, M., and Kumar, S. 2004. Prospects for inferring very large phylogenies by using the neighbor-joining method. *Proceedings of the National Academy of Sciences* (*USA*). 101:11030-11035.

Tamura, K., Stecher, G., and Kumar, S. 2021. MEGA 11: Molecular Evolutionary Genetics Analysis Version 11. *Molecular Biology and Evolution*.

Tanney, C.A.S., Backer, R., Geitmann, A., Smith, D.L. 2021. *Cannabis* glandular trichomes: a cellular metabolite factory. *Front Plant Science.* 20(12): 721986.

Teama, S. 2018. *DNA Polymorphisms: DNA-Based Molecular Markers and Their Application in Medicine*. Open Access Peer-Reviewed Chapter.

Tineo, D., Bustamante D.E, Calderon, M.S, Mendoza, J.E, Huaman, E., and Oliva, M. 2020. An integrative approach reveals five new species of highland papayas (Caricaceae, *Vasconcellea*) from northern Peru. *Plos One.* 15(12): e0242469.

Tjitrosoepomo, G. 2005. *Morfologi Tumbuhan*. Gadjah Mada University Press, Yogyakarta.

Tjitrosomo, S.S. 1983. *Botani Umum Jilid 3*. Angkasa, Bandung.

Tonaco, L.A.B., Gomes, F.L., Velasquez-Melendez, G. 2018. The proteolytic fraction from latex of *Vasconcellea cundinamarcensis* (p1g10) enhances wound healing of diabetic foot ulcers: a double-blind randomized pilot study. *Adv Ther*. 35: 494–502.

Triani N. 2020. Isolasi DNA tanaman jeruk dengan menggunakan metode *Cetyl Trimethyl Ammonium Bromide* (CTAB). *GTech - Jurnal Teknologi Terapan.* 3: 221–226.

Tricahya, E. 2012. Karakterisasi Kromosom Cabai Rawit (*Capsicum frutescens*) Varietas Cakra Putih. *Skripsi*. UIN Sunan Kalijaga, Yogyakarta.

Trustinah dan Iswanto. 2013. Pengaruh interaksi genotipe dan lingkungan terhadap hasil kacang hijau. *Penelitian Pertanian Tanaman Pangan*. 32(1): 36–42.

Tysara, L. 2023. Iklim Tropis adalah Kondisi yang Dipengaruhi Khatulistiwa, Ini Ciri dan Negaranya. (https://www.liputan6.com/hot/read/5448476/iklim-tropis-adalah-kondisi-yang-dipengaruhi-khatulistiwa-ini-ciri-dan-negaranya). Diakses tanggal 30 November 2023.

Ubay, U. 2018. Penguasaan Teknologi Kultur Antera Bermanfaat untuk Akselerasi PerakitanVarietas.https://www.swadayaonline.com/artikel/1137/Penguasaan- Teknologi-Kultur-Antera-Bermanfaat-untuk-Akselerasi-Perakitan-Varietas/ diakses tanggal 4 November 2021.

Van, K., Kang, Y.J., Han, K.S., Lee, Y.H., Gwag, J.G., Moon, J.K., Lee, S.H. 2013. Genomewide SNP discovery in mungbean bu Illumina HiSeq. *Theoretical and Applied Genetics.* 126(8): 2017–2027.

Varga, S. and Soulsbury, C.D. 2020. Environmental stressors affect sex ratios in sexually dimorphic plant sexual systems. *Plant Biology (Stuttgart).* 22(5): 890–898.

Vega-Galvez, A., Poblete, J., Quispe, I., and Pasten, A. 2019. Chemical and bioactive characterization of papaya (*Vasconcellea pubescens*) under

different drying technologies: evaluation of antioxidant and antidiabetic potential. *Journal of Food Measure Character*. 13(1): 1–11.

Vincent, L., Soorianathasundaram, K.., and Shivashankara, K.S. 2019. Correlation of leaf parameters with incidence of papaya ring spot virus incultivated papaya and its wild relatives. *Journal of Horticultural Sciences.* 14(2): 130–136.

Von Zglinicki, T. 2002. Oxidative stress shortens telomeres. *Trends Biochem Science.* 27: 339–344.

Vos, P., R. Hogers, M. Bleeker, M. Reijans, T. van de Lee, M. Hornes, A. F., J. Pot, J. Peleman, M. Kuiper, and M. Z. 1995. AFLP: A New Technique for DNA Fingerprinting. *Nucleic Acids Research.* 23: 4407–4414.

Wadekar, A.B., Nimbalwar, M.G., Panchale, W.A., Gudalwar, B.R., Manwar, J.V., and Bakal, R.L. 2021. Morphology, phytochemistry and pharmacological aspects of *Carica papaya*: a review. *Global Scholarly Communication Biological and Pharmaceutical Sciences*. 14(03): 234–248.

Wagner, G.J., Wang, E., and Shepherd, R.W. 2004. New approaches for studying and exploiting an old protuberance, the plant trichome. *Annals of Botany*. 93: 3–11.

Wahyudi, I.A. 2015. Resensi biologi molekuler adalah ilmu yang menyenangkan dan mudah. *Jurnal Teknosains*. 4(2): 101–198.

Wahyuni, S. dan Bermawie, N. 2015. Deteksi tanaman pala jantan dan betina secara dini berbasis kearifan lokal. *Warta Penelitian dan Pengembangan Tanaman Industri.* 21(2): 28–31.

Wahyuningtyas, R.D. dan Rahardi, D. 2013. Peta dan struktur vegetasi naungan porang (*Amorphophallus muelleri* Blume) di wilayah Malang Raya. *J. Biotropika*. 1(4): 139–143.

Walker, D. 1999. *Plant Growth Regulation*. Springer.

Wang, Q., Kong, L.H., Hao, X., Wang, J., Lin, J., and Samaj, F.B. 2005. Effects of brefeldin a on pollen germination and tube growth antagonistic effects on endocytosis and secretion. *Plant Physiology.* 6(1): 29–36.

Wardhani, 2019. Studi Anatomi Trikoma Daun pada Famili *Solanaceae* dan *Cucurbitaceae.* 3(2): 78–81.

Wardhini, T.H. dan Iriawati. 2014. *Embriologi Tumbuhan.* In: Struktur Bunga, Bagian- bagian Bunga, dan Modifikasinya. Universitas Terbuka, Jakarta.

Warmadewi, D.A. 2017. *Buku Ajar Mutasi Genetik.* Fakultas Peternakan Universitas Udayana, Denpasar.

Wati, M. 2008. Studi kromosom ikan bilih (*Mystacolensus pandangensis*, Blkr, Cyprinidae) Danau Singkarak Sumatera Barat. *Skripsi*. Universitas Andalas, Padang.

Watson JM, Riha K. 2011. Telomeres, aging, and plants: from weeds to Methuselah - a mini-review. *Gerontology*. 57(2): 129–36.

Weil, R.R. and Brady, N.C. 2017. *The Nature and Properties of Soils. 15th Edition*, Pearson, New York.

Welsh, J., dan McClelland, M. 1990. Finger printing genomes using PCR with arbitrary primers. *Nucleic Acids Research*. 18: 7213–7218.

Werker, E. 2005. *Trichome Diversity and Development in Plant Trichomes* (Hallahan D.L and J.C Gray, eds.). *Advances in Botanical Research.* Vol 31. Academic Press, New York.

Widiastuti, A. dan E.R. Palupi. 2008. Viabilitas Serbuk Sari dan Pengaruh terhadap Keberhasilan Pembentukan Buah Kelapa Sawit. *Biodiversitas*. 9(1): 35–38.

Widyastuti, H. 2012. Studi Anatomi Organ dan Perkembangan Bunga Tanaman Jarak Pagar (*Jatropha curcas* L). *Skripsi*. Iinstitut Pertanian Bogor, Bogor.

Wijayanti, Y. 2016. Pengaruh Media Tanam dan Pemeraman Buah Terhadap Viabilitas Benih Carica (*Carica pubescens*). *Skripsi.* Universitas Muhammadiyah Purwokerto, Purwokerto.

Williams, J.G.K., A.R. Kubelik, K.J. Livak, J.A.R. and S.V.T. 1990. DNA Polymorfisms Amplified by arbitrary primers are useful as genetic markers. *Nucleic Acids Research*. 18(22): 6531–6535.

World Flora Online (WFO). 2024. *Vasconcellea pubescens* A.DC. http://www.worldfloraonline.org/taxon/wfo-0000421667. Accessed on: 25 April 2024.

Wulandari, R.D. 2003. Perbandingan Struktur Kromosom antara Manusia, Simpanse (*Pan troglodytes*) dan Orang Utan (*Pongo pygmaeus*) dengan Menggunakan Teknik *G-Banding*. *Tesis*. Universitaas Airlangga, Surabaya.

Wulandari, A.S. dan Wijaya, T.R. 2015. Analisis kromosom tanaman jati (*Tectona grandis* Lf) dengan metode pewarnaan. *Jurnal Silvikultur Tropika* 6(1): 49-54.

Yakubov, B., Barazani, A., and Golan A. 2005. Combination of SCAR primers and Touchdown-PCR for sex identification in *Pistacia vera* L. *Scientia Horticulturae*. 103(4): 473–478.

Yun, A., Shi, S., Sun, S., Jing, Y., Li, Z., Zhang, X., Li, X., and Wu, F. 2022. Telomerase activity, relative telomere length, and longevity in alfalfa (*Medicago sativa* L.). *PeerJ Inc.* 1–18.

Yuniastuti, E., Masailla, A.P.D., Nandariyah, Rahmah, N. 2023. Karyotyping of green, yellow, and red matoa (*Pometia pinnata* J.R. Forst. and G. Forst.) from Central Java, Indonesia. *Biodiversitas*. 24(1): 40–46.

Yuniarti, H. dan Su'udi, B.C. 2021. Pemilihan Primer untuk Proses Sekuensing. (https://www.scribd.com/document/512338596/2021-MD-TI-Pemilihan-Primer-pada-Proses-PCR-Harumi-Bambang-1). Diakses pada tanggal 30 November 2023.

Yuwono, T. 2009. Teori dan *Aplikasi Polymerase Chain Reaction*. Penerbit Andi, Yogyakarta.

Zahrina, Hasanuddin, Wardiah. 2017. Studi morfologi serbuk sari enam anggota Familia Rubiaceae. *Jurnal Ilmiah Mahasiswa Fakultas Keguruan dan Ilmu Pendidikan Unsyiah.* 2(1): 114-123.

Závodník, M., Fajkus, P., Franek, M., Kopecký, D., Garcia, S., Dodsworth, S., Orejuela, A., Kilar, A., Ptáček, J., Mátl, M., Hýsková, A., Fajkus, J., and Peška, V. 2023. Telomerase RNA gene paralogs in plants – the usual pathway to unusual telomeres. *New Phytologist*. 239(6): 2353–2366.

Zhang, Y., and Chen, D. 2016. Anthocyanins: a review of their biosynthesis, biological functions, and applications. *Joural of Functional Foods*. 22: 26–42.

Zulfahmi. 2013. Penanda DNA untuk analisis genetik tanaman. *Jurnal Agroteknologi*. 3(2): 41-52.