

REFERENCES

- Achan, J., Talisuna, AO., Erhart, A., Yeka, A., Tibenderana, JK., Baliraine, FN., Rosenthal, PJ., D'Alessandro, U., 2011. Quinine, an old anti-malarial drug in a modern world: role in the treatment of malaria. *Malaria journal*, pp. 144.
- Alonso, J., 2004. *Phytopharmaceutical and Nutraceutical Treaty*. Barcelona: Corpus.
- Al-Saghrir, M. G. & Abdel-Salam, G. A.-S., 2015. Genetic Diversity of Peanut (*Arachis hypogea* L.) Cultivars as Revealed by RAPD Markers. *American Journal of Plant Sciences*, 6, pp. 2303-2308.
- Andersson, L. & Antonelli, A., 2005. Phylogeny of the tribe Cinchoneae (Rubiaceae), its position in Cinchonoideae, and description of a new genus, Ciliosemina. *TAXON*, 54 (1), pp. 17–28.
- Andersson, Lennart., 1998. *A Revision of Genus Cinchona (Rubiaceae-Cinchonae)*. New York: The New York Botanical Garden. 80: pp. 28-31
- Ardiana, DW., 2009. Teknik Isolasi DNA Genom Tanaman Pepaya dan Jeruk Menggunakan Modifikasi Buffer CTAB. *Buletin Teknik Pertanian*, 14, pp. 12- 16.
- Bloand, P. B., 2001. *WHO Global Strategy for Containment of Antimicrobial Resistance. Drug Resistance in Malaria*. [Online] Available at: <http://who.int> [Accessed 25 December 2019]
- Boiteux, L.S., Fonseca, M.E.N. and Simon, P.W., 1999. Effects of plant tissue and DNA purification method on randomly amplified polymorphic DNA-based genetic fingerprinting analysis in carrot. *Journal of the American Society for Horticultural Science*, 124(1), pp.32-38.
- Cheng, G., Cai, Xiang-hai., Zhang, B., Li, Y., Gu, Y., Bao, M., Liu, Y., Luo, X., 2014. Cinchona Alkaloids from *Cinchona pubescent*. *Planta Medicinal*, pp. 223-230.
- Chesnokov, Y. & Artemyeva, A., 2015. Evaluation of the Measure of Polymorphism Information of Genetic Diversity. *Agriculture Biology*., 5(1), pp. 7-13.
- Desjardins, P. & Conklin, D., 2010. NanoDrop Microvolume Quantitation of Nucleic Acids. *Journal of visualize experiment*, 45(2565), pp. 1-11.
- Druilhe, P. B. O., Chongsuphajaisiddhi, T. & Berthe, J., 1988. Activity of a combination of three cinchona bark alkaloids against *Plasmodium falciparum* in vitro. *Antimicrobial Agents Chemotherapy*, pp. 250.
- Ellur, V., Goud, I.S. and Prabakaran, A.J., 2016. Morphological and molecular characterization of interspecific cross between cultivated Sunflower

(*Helianthus annuus* L. with wild annual diploid *H. argophyllus*). *Electronic Journal of Plant Breeding*, 7(2), pp.386-391.

- Felsenstein, J., 1978. Cases in which parsimony and compatibility methods will be positively misleading. *Systematic Zoology*, 27, pp. 401-410.
- Fraga, J., Rodriguez, J., Fuentes, O., Fernandez-Calienes, A., Castex, M., 2005. Optimization of Random Amplified Polymorphic DNA Techniques for Use in Genetic Studies of Cuban Triatominae. *Revista do Instituto de Medicina Tropical de São Paulo*, 47(5), pp. 295-300.
- Goss, A., 2014. Building the world's supply of quinine: Dutch colonialism and the origins of a global pharmaceutical industry. *Endeavour*, 8(14), pp. 8-18.
- Gouta, H., Ksia, E., Zoghalmi, N., Zarrouk, M. and Mliki, A., 2008. Genetic diversity and phylogenetic relationships among Tunisian almond cultivars revealed by RAPD markers. *The Journal of Horticultural Science and Biotechnology*, 83(6), pp.707-712.
- Grattapaglia, D., Chapparó, J., Willcox, P., McCord, S., Werner, D., Amerson, H., McKeand, S., Bridgewater, F., Whetten, R., O'Malley, D., Sederoff, R., 1992. Mapping in the woody plants with RAPD markers: Application into breeding in forestry and Horticulture. *Plant breeding g symposia series*, pp. 37-40.
- Griffin, H. G. & Annete, M. G., 1994. *PCR technology: current innovations*. 1st ed. New York: CRC Press.
- Gurung, P. & Puspal. D., 2017. Spectrum of biological properties of cinchona alkaloids. *Journal of Pharmacognosy and Phytochemistry*, 6(4), pp. 162-166.
- Hashmi, G., Huettel, R., Krusberg, L. & Hammerschlag, F., 1997. RAPD Analysis of Somaclonal Variants Derived From Embryo Callus Culture of Peach. *Plant Cell Reproduction*, 6, pp. 624-627.
- Hayward, M., Bosemark, N. & (Eds.), Romagosa. I., 1993. *Plant Breeding: Principle and Prospects*. London: Chapman & Hall.
- Hoople, G.D., 2016. *Gel-Seq: An Approach for Simultaneously Sequencing the Genome and Transcriptome in Small Populations of Cells* (Doctoral dissertation, UC Berkeley). 4, pp. 27-38
- Langga, I. F., Muh, R. & Tutik, K., 2012. Optimalisasi Suhu dan Lama Inkubasi dalam Ekstraksi DNA Tanaman Bitti (*Vitex cofassus* .Reinw) Serta Analisis Keragaman Genetik dengan Teknik RAPD-PCR. *J. Sains & Teknologi*, 12(3), pp. 265-276.
- Lindbergia & Hasel, K., 2004. *The use of inter simple sequence repeats (ISSR) and Random Amplified Polymorphic DNA (RAPD) in bryophyte population studies - Scientific Figure on ResearchGate*. [Online] Available at: <https://www.researchgate.net/figure/RAPD-ISSR-primer-sequences-from-the->

- Mitsui, N., Noro, T., Kuroyanagi, M., Miyase, T., Umehara, K., Ueno, A., 1989. Monoamine oxidase inhibitors from Cinchona Cortex. *Chemistry Pharmaceutical Bulletin*, 37(2), pp. 363-366.
- Malviya, N. and Yadav, D., 2010. RAPD analysis among pigeon pea [*Cajanus cajan* (L.) Mill sp.] cultivars for their genetic diversity. *Genetic engineering and biotechnology Journal*, 1, pp.1-9.
- Mukunthakumar, S., Pillai, Padmesh., Sadanandan, Vineesh., Skaria, Reby., Kumar, K., Krishnan, P., 2013. Genetic diversity and differentiation analysis among wild antecedents of banana (*Musa acuminata* C.) using RAPD markers. *Indian Journal of Biotechnology*, 12, pp. 493-498.
- Orozco-Castillo, C., Chalmers, K., Waugh, R., Powell, W., 1994. Detection of genetic diversity and selective gene introgression in coffee using RAPD markers. *Theory and Applied Genetic*, 87, pp. 934-940.
- Osman, Gamal & Abdel Latif, Amani, 2017. Comparison of three genomic DNA extraction methods to obtain high DNA quality from maize. *Plant Methods*, 13, pp. 2-9.
- Pandin, D. S., 2010. Penanda DNA untuk Pemuliaan Tanaman Kelapa (*Cocos nucifera* L.). *Perspektif*, 9(1), pp. 21-35.
- Pharmawati, M., 2009. Optimalisasi Ekstraksi DNA dan PCR-RAPD pada *Grevillea* spp. (Proteaceae). *Biologi*, 13(1), pp. 12-16.
- Purnaningsih, T., 2013. Analysis of Somaclonal Variation in *Cinchona pubescent*. *Biospecies*, 6, pp. 1-5.
- Rolim, L.D.N., Cavalcante, M.A.D.Q., Urben, A.F. and Buso, G.S.C., 2011. Use of RAPD molecular markers on differentiation of Brazilian and Chinese *Ganoderma lucidum* strains. *Brazilian Archives of Biology and Technology*, 54(2), pp.273-281.
- Sanderson, B.A., Araki N., Lilley, Jennifer L., Guerrero, Gilberto., Lewis, Kevin., 2014. Modification of Gel Architecture and TBE/TAE Buffer Composition to Minimize Heating during Agarose Gel Electrophoresis. *Analytical Biochemistry*, 454, pp. 44-52.
- Somantri, I. H., Santoso, T. J., Minantyorini., Ambarwati, A. D., Sisharmini, A., Apriana, A., 2002. *Karakterisasi Molekular Plasa Nutfah Tanaman Pangan*, s.l.: Balai Penelitian Bioteknologi dan Sumberdaya Genetik Pertanian.
- Samal, S., Rout, G.R., Nayak, S., Nanda, R.M., Lenka, P.C. and Das, P., 2003. Primer screening and optimization for RAPD analysis of cashew. *Biologia Plantarum*, 46(2), pp.301-304.

- Spichiger, R., 2004. *Systematic Botany of Flowering Plants: A New Phylogenetic Approach to Angiosperms of the Temperate and Tropical Regions*.
- Swofford, D. L., Olsen, G. J., Waddell, P. J., & Hillis, D. M., 1996. Phylogenetic inference. *In Molecular Systematics, 2nd ed. (Hillis, D. M., Moritz, C., and Mable, B. K., eds.)*, Sunderland: Sinauer, 6, pp. 407-514.
- Tao ,Chen & Taylor, Charlotte M., 2011. CHINCHONA. *In WU, C. Y., Flora of China*. 19(16): pp. 88-89
- Uslan & Pharmawati, M., 2015. Optimasi Konsentrasi DNA dan MgCl₂ pada Reaksi Polymerase Chain Reaction-Random Amplified Polymorphic DNA untuk Analisis Keragaman Genetik Tanaman Faloak (*Sterculia quadrifida* R.Br). *Bioslogos*, 5(1), pp. 27-33.
- Vogelstein, B. & Gillespie, D., 1979. *Proc National Academic of Science DNA Isolation Mini Kit (Plant)*. [Online] Available at: <http://www.geneaid.com/products/genomic-dna-purification/dna-extraction-kit-tissue-miniprep> [Accessed 7 January 2020]
- Wang, P., Lu, Y., Zheng, M., Rong, T. and Tang, Q., 2011. RAPD and internal transcribed spacer sequence analyses reveal *Zea nicaraguensis* as a section Luxuriantes species close to *Zea luxurians*. *PLoS One*, 6(4).
- Williams, J., Kubelik, A.R., Livak, K., Rafalski, J.A., Tingey, S.V., 1990. DNA polymorphisms amplified by arbitrary primers are useful as genetic markers. *Nucleic Acid Research*, 18, pp. 6531-6535.