



DAFTAR PUSTAKA

- Afzal, A.J., Wood, A.J. and Lightfoot, D.A. 2008. Plant receptor-like serine threonine kinases: roles in signaling and plant defense. *Molecular Plant Microbe Interactions*, 21(5): 507-517.
- Agrios, G.N., 1996. Ilmu penyakit tumbuhan. Busnia, M penerjemah. Terjemahan dari *Plant Pathology*, 3. Gadjah Mada University Press, Yogyakarta.
- Agrios. 2005. *Plant Pathology*. 5th Edition. Elsevier Academic Press, New York.
- Aprilyanto, V. dan Sembiring, L. 2015. *Bioinformatika*. Mobius, Jakarta. p 406.
- Assagaf, M. H. 2012. 1001 Spesies Anggrek yang Dapat Berbunga di Indonesia. Kataelha, Jakarta.
- Ausubel, F.M., Brent, R., Kingston, R.E., Moore, D.D., Seidman, J.G., Smith, J.A. and Struhl, K., 1987. *Current protocols in molecular biology*. NY: Wiley, New York.
- Brueggeman, R., Rostoks, N., Kudrna, D., Kilian, A., Han, F., Chen, J., Druka, A., Steffenson, B. and Kleinhofs, A. 2002. The barley stem rust-resistance gene *Rpg1* is a novel disease-resistance gene with homology to receptor kinases. *Proceedings of the National Academy of Sciences*, 99(14) :9328-9333.
- Chan, Y.L., Lin, K.H., Liao, L.J., Chen, W.H. and Chan, M.T., 2005. Gene stacking in *Phalaenopsis* orchid enhances dual tolerance to pathogen attack. *Transgenic research*, 14(3): 279-288.
- Chandra, S., Martin, G.B. and Low, P.S. 1996. The *Pto* kinase mediates a signaling pathway leading to the oxidative burst in tomato. *Proceedings of the National Academy of Sciences*, 93(23): 13393-13397.
- Chang J.H., Tai Y.S., Bernal A.J., Lavelle D.T., Staskawicz B.J., Michelmore R.W.M. 2002. Functional analyses of the *Pto* resistance gene family in tomato and the identification of a minor resistance determinant in a susceptible haplotype. *Mol Plant-Microbe Interact* 15:281–291
- Chase, M.W., Williams, N.H., de Faria, A.D., Neubig, K.M., Amaral, M.D.C.E. and Whitten, W.M. 2009. Floral convergence in *Oncidiinae* (Cymbidieae; Orchidaceae): an expanded concept of *Gomesa* and a new genus *Nohawilliamsia*. *Annals of Botany*, 104(3): 387-402.
- Cheng Y.J., Guo W.W., Yi H.L., Pang X.M., and Deng X. 2003. An efficient protocol for genomic DNA extraction from citrus species. *Plant Molecular Biology Reporter* 21: 177a-177g.
- Comber, J.B. 1990. *Orchids of Java*. Charoen Silp Press, Bangkok.
- Corkill, G. and Rapley, R., 2008. The Manipulation of Nucleic Acids. In *Molecular Biomethods Handbook*. Humana Press, New York. p 3-1
- Crowder, L.V. 2015. *Genetika Tumbuhan*. Gadjah Mada University Press, Yogyakarta.
- Davidsson, P.R., Kariola, T., Niemi, O. and Palva, T., 2013. Pathogenicity of and plant immunity to soft rot pectobacteria. *Frontiers in plant science*, 4:191.
- Deng Z., and Gmitter F.G. 2003. Cloning and characterization of receptor kinase class disease resistance gene candidates in Citrus. *Theoretical and Applied Genetics*. 108: 53–61.



- Di Gaspero G, Cipriani G. 2003. Nucleotide binding site/leucine-rich repeats, *Pto* like and receptor-like kinases related to disease resistance in grapevine. *Molecular Genetics and Genomics*. 269: 612–623.
- Djaafarar, R. 2002. *Phalaenopsis* Spesies: Jenis dan Potensi untuk Silangan. Penebar Swadaya, Jakarta.
- Doyle, J.J. and J.L. Doyle. 1987. A rapid DNA isolation procedure for small quantities of fresh leaf tissue. *Phytochem. Bull.* 19: 11-15.
- Elina, J. dan Sukma, D., 2017. Isolasi dan Karakterisasi *Pto* Asal 20 Aksesori Anggrek *Phalaenopsis*. *Jurnal Agronomi Indonesia*, 45(2): 204-211.
- Erlich, H.A. 1989. Polymerase Chain Reaction. *Journal of Clinical Immunology* 9: 437–447.
- Fachtiyah, E.L.A., Rumingtyas, S Widyarti, S Rahayu. 2011. *Biologi Molekular*. Erlangga, Jakarta.
- Farmawati, D.A., Wirajana, I.N. and Yowan, S.C., 2015. Perbandingan Kualitas DNA dengan menggunakan Metode Boom Original dan Boom Modifikasi Pada Isolat *Mycobacterium Tuberculosis* 151. *Jurnal Kimia*, 9(1) :41-46.
- Flor H.H. 1971. Current Status of the Gene-For-Gene Concept. *Ann Rev of Phytopathol* 9: 275-296
- Gandawidjaya, D. dan S. Sastrapradja. 1980. Plasma nutfah *Dendrobium* asal Indonesia. *Bull. Kebun Raya* 4(4): 113–125.
- Gnanamanickam, S.S. 2006. *Plant-associated bacteria*. Heidelberg. Springer, Germany.
- Grant, M., Brown, I., Adams, S., Knight, M., Ainslie, A. and Mansfield, J., 2000. The RPM1 plant disease resistance gene facilitates a rapid and sustained increase in cytosolic calcium that is necessary for the oxidative burst and hypersensitive cell death. *The Plant Journal*, 23(4): .441-450.
- Grewal, R.K., Sumanti, G., dan Sampa, D. 2012. *Xanthomonas oryzae* pv. *oryzae* triggers immediate transcriptomic modulations in rice. *BMC Genomics*. 13 (49)
- Hammond-Kosack, K. E., and Jones, J.D.G. 1997. Plant disease Resistance Genes. *Annu. Rev. Plant Physiol., Plant Mol. Biol.* 48: 575-607.
- Han, X., L. Li, L. Cui, J. Xing, L. Tang, M. Cao. 2011. Isolation of candidate disease resistance genes from enrichment library of *Oryza minuta* based on conserved domains. *African Journal Biotechnol.* 10:14738- 14745.
- Handoyo F. 2010. *Orchids of Indonesia*. Indonesian Orchid Society, Jakarta.
- Hanudin dan Indijarto, B. R. 2012. Penyakit busuk lunak (plb) pada anggrek: penyebab dan upaya pengendaliannya. *Prosiding Seminar Nasional Anggrek 2012*. Balai Penelitian Tanaman Hias. 275-281
- Hasanuddin, H. 2010. Jenis Tumbuhan Anggrek Epifit di Kawasan Cagar Alam Jantho Kabupaten Aceh Besar. *Jurnal Biologi Edukasi*, 2(2): 6-14.
- Hidayat, H., Saleh, E. and Aulawi, T., 2016. Identifikasi Keragaman Gen Bmpr-1b (Bone Morphogenetic Protein Receptor Ib) Pada Ayam Arab, ayam Kampung Dan Ayam Ras Petelur Menggunakan Pcr-rflp. *Jurnal Peternakan*, 13(1): 1-12.
- Hidayat, T. and Pancoro, A., 2016. Ulasan Kajian Filogenetika Molekuler dan Peranannya dalam Menyediakan Informasi Dasar untuk Meningkatkan Kualitas Sumber Genetik Anggrek. *Jurnal AgroBiogen*, 4(1): 35-40.



- Hidayat, T. and Pancoro, A., 2016. Ulasan Kajian Filogenetika Molekuler dan Peranannya dalam Menyediakan Informasi Dasar untuk Meningkatkan Kualitas Sumber Genetik Anggrek. *Jurnal Agro Biogen*, 4(1): 35-40.
- Ihsan. 2018. Klasifikasi dan morfologi tanamn anggrek. <https://www.petanihebat.com/klasifikasi-dan-morfologi-tanaman-anggrek/>. Diakses pada tanggal 3 September 2018.
- Ishmael, F.T., and Stellato, C., 2011. Principles and applications of polymerase chain reaction : Basic science for the practicing physician, *annals of allergy, ashma, and immunology*, 101: 437-443
- Jabs, T., Tschöpe, M., Colling, C., Hahlbrock, K. and Scheel, D., 1997. Elicitor-stimulated ion fluxes and O₂⁻ from the oxidative burst are essential components in triggering defense gene activation and phytoalexin synthesis in parsley. *Proceedings of the National Academy of Sciences*, 94(9): 4800-4805.
- Javandira, C., Aini, L.Q. and Abadi, A.L., 2013. Pengendalian Penyakit Busuk Lunak Umbi Kentang (*Erwinia carotovora*) dengan Memanfaatkan Agens Hayati *Bacillus subtilis* dan *Pseudomonas fluorescens*. *Jurnal Hama dan Penyakit Tumbuhan*, 1(1): 90.
- Joko, T., Kusumandari, N. and Hartono, S., 2011. Optimasi metode PCR untuk deteksi *Pectobacterium carotovorum*, penyebab penyakit busuk lunak anggrek. *Jurnal Perlindungan Tanaman Indonesia*, 17(2): 54-59.
- Kado, C.I. 2010. *Plant Bacteriology*. APS Press. Minnesota. Kamemoto, H., T. D. Amore, dan A. R. Kuehenle. 1999. *Breeding Dendrobium Orchids in Hawaii*. University of Hawai'i Press. Honolulu.
- Kerbauy, G.B., 1984. In vitro flowering of *Oncidium varicosum* mericlones (Orchidaceae). *Plant science letters*, 35(1): 73-75.
- Klug, W.S. and Cummings, M.R., 2006. *Concepts of genetics*. Upper Saddle River, NJ: Pearson Education.
- Kurniasih S. 2012. Pemanfaatan marka molekuler untuk mendukung perakitan kultivar unggul kakao (*Theobroma cacao* L.). Bogor (ID): Institut Pertanian Bogor. Disertasi.
- Kurniawan, P.A., Budiretnani, D.A. and Handoko, P. 2013. Inventarisasi Tanaman Anggrek di Hutan Irenggolo Dusun Besuki, Desa Jugo, Mojo, Kediri. Prosiding pada Seminar Nasional X Pendidikan Biologi FKIP UNS.
- Kusumastuti, N., Tri Joko, S.P. and Subandiyah, I.S., 2014. Kisaran inang dan karakterisasi *Pectobacterium* sp. yang diisolasi dari anggrek berdasarkan analisis gen 16S rRNA dan beberapa gen *housekeeping* Universitas Gadjah Mada. Skripsi.
- Lehti-Shiu, M.D. and Shiu, S.H., 2012. Diversity, classification and function of the plant protein kinase superfamily. *Phil. Trans. R. Soc. B*, 367(1602): 2619-2639.
- Lestari, S. 1985. *Mengenal dan Bertanam Anggrek*. Aneka Ilmu, Semarang.
- Liau, C.H., Lu, J.C., Prasad, V., Hsiao, H.H., You, S.J., Lee, J.T., Yang, N.S., Huang, H.E., Feng, T.Y., Chen, W.H. and Chan, M.T., 2003. The sweet pepper ferredoxin-like protein (pflp) conferred resistance against soft rot disease in *Oncidium* orchid. *Transgenic research*, 12(3): 329-336.



- Loegering, W.Q., 1984. Genetics of the pathogen—host association. In: Bushnell WR, Roelfs AP (eds) *The cereal rusts: origins, specificity, structure and physiology*. Academic Press, New York. P 165-192
- Ma, B., Hibbing, M.E., Kim, H.S., Reedy, R.M., Yedidia, I., Breuer, J., Breuer, J., Glasner, J.D., Perna, N.T., Kelman, A. and Charkowski, A.O., 2007. Host range and molecular phylogenies of the soft rot enterobacterial genera *Pectobacterium* and *Dickeya*. *Phytopathology*, 97(9): 1150-1163.
- Martin, G.B., Brommonschenkel, S.H., Chunwongse, J., Frary, A., Ganai, M.W., Spivey, R., Wu, T., Earle, E.D. and Tanksley, S.D., 1993. Map-based cloning of a protein kinase gene conferring disease resistance in tomato. *Science*, 262(5138), pp.1432-1436.
- Martínez Z.M.G., Castagnaro J.C., Díaz R.J.C., 2008. Genetic diversity of *Pto*-like serine/threonine kinase disease resistance genes in cultivated and wild strawberries. *Journal of Molecular Evolution*. 67: 211–221.
- Mucyn T.S., Clemente A, Andriotis V.M.E., Balmuth A.L., Oldroyd G.E.D., Staskawicz B.J., Rathjen J.P., 2006. The tomato NBARC-LRR protein Prf interacts with *Pto* kinase in vivo to regulate specific plant immunity. *Plant Cell* 18:2792–2806
- Musa, F. F., Syamsuardi, dan A. Arbain. 2013. Keanekaragaman jenis Orchidaceae (Anggrek-anggrekan) di kawasan hutan lindung Gunung Talang Sumatera Barat. *Jurnal Biologi Universitas Andalas*, 2(2): 153-160.
- Oh, C.S., and Martin, G.B. 2011. Effector-triggered immunity mediated by the *Pto* kinase. *Trends in plant science*, 16(3): 132-140.
- Pabst, G. F. and Dungs, F. 1977. *Orchidaceae Brasilienses*. Brucke-Verlag Kurt Schmiersow, Hildesheim
- Parravicini, G., C. Gessler, C. Denance, P. Lasserre-Zuber, E. Vergne, M. Brisset, A. Patocchi, C. Durel, G.A.L. Brogini. 2011. Identification of serine/threonine kinase and nucleotide-binding site-leucine-rich repeat (NBS-LRR) genes in the fire blight resistance quantitative trait locus of apple cultivar ‘Evereste’. *Molec. Plant Pathol.* 12:493-505
- Peraza-Echeverría S, James-Kay A, Canto-Canché B, Castillo-Castro E. 2007. Structural and phylogenetic analysis of *Pto*-type disease resistance gene candidates in banana. *Molecular Genetics and Genomics*. 278: 443–453.
- Perraudin, F., Popovici, J. and Bertrand, C., 2006. Analysis of headspace-solid microextracts from flowers of *Maxillaria tenuifolia* Lindl. by GC-MS. *Electronic Journal of Natural Substances*, 1: 1-5.
- Pieterse, C.M.J., Leon-Reyes, A., Sjoerd, V.E. and Saskia, C.M.V.W. 2009. Networking by small-molecule hormones in plant immunity. *Nature Chemical Biology*. 5 (5): 308-316.
- Pratiwi, R. 2001. Mengenal metode elektroforesis. *Jurnal Oseana*, 26(1): 25-31.
- Puspitaningtyas, D.M., 2007. Inventarisasi Anggrek dan Inangnya di Taman Nasional Meru Betiri–Jawa Timur. *Biodiversitas*, 8(3): 210-214.
- Quirin, E.A., H. Mann, R.S. Meyer, A. Traini, M.I. Chiusano, A. Litt, J.M. Bradeen. 2012. Evolutionary meta analysis of solanaceous resistance gene and *Solanum* resistance gene analog sequences and a practical framework for cross-species comparisons. *MPMI* 25:603-612.



- Rahman, M.T., Uddin, M.S., Sultana, R., Mone, A., and Setu, M. 2013. Polymerase Chain Reaction (PCR) : A short review. *Anwer Khan Modrn Medical College Journal*.4(1): 30-36
- Rose, L.E., R.W. Michelmore, C.H. Langley. 2007. Natural variation in the *Pto* disease resistance gene within species of wild tomato (*Lycopersicon*). II. Population enetics of *Pto*. *Genetics* 175:1307-1319.
- Sabran, M., Krismawati, A., Galingging, Y.R. and Firmansyah, M.A., 2003. Eksplorasi dan karakterisasi tanaman anggrek di Kalimantan Tengah. *Buletin Plasma Nutfah*, 9(1): 1-6.
- Salmeron J.M., Oldroyd G.E.D., Rommens C.M.T., Scofield S.R., Kim H.S., Lavelle D.T., Dahlbeck D, Staskawicz B.J. Tomato *Prf* is a member of the leucine-rich-repeat class of plant disease resistance genes and lies embedded within the *Pto* kinase gene cluster. *Cell*, 86: 123–133.
- Sarwono, B., 2002. Mengenal & Membuat Anggrek Hibrida. *Agro Media*, Jakarta.
- Semiarti, E. and Rozikin, R., 2015. Karakterisasi gen ketahanan terhadap suhu tinggi HSP70 pada anggrek *Vanda tricolor* var. *suavis* forma Merapi.
- Soelistijono, R., Utami, D.S., Achmadi, P. 2017. Identifikasi *Rhizoctonia* Mikoriza dan *Fusarium* pada Anggrek *Ascocentrum Miniatum*. *Journal of Biota*, 2(1): 7-13.
- Staskawicz, B.J., Ausubel, F.M., Baker, B.J., Ellis, J.G., and Jones, J.D.G. 1995. Molecular genetics of plant disease resistance. *Journal Science*, 268: 661–667
- Sulistiari, D. and Djarwaningsih, T., 2016. Keanekaragaman jenis-jenis Anggrek Kepulauan Karimunjawa. *Jurnal Teknologi Lingkungan*, 10(2): 167-172.
- Surzycki, S., 2012. *Basic techniques in molecular biology*. Springer Science & Business Media, Berlin, Heidelberg, New York
- Sutanto, A., D. Sukma, C. Hermanto, S. Sudarsono. 2014. Isolation and characterization of Resistance Gene Analogue (RGA) from *Fusarium* resistant banana cultivars. *Emir. J. Food Agric*. 26:508-518.
- Suzanna, M. 2015. Anggrek ekor tupai (*Rhynchostylis violacea*) . <<http://krbogor.lipi.go.id/id/Anggrek-Ekor-Tupai-Rhynchostylis-violacea.html>>. Diakses pada 3 Februari 2019.
- Syafaruddin dan Santoso T.J. 2011. Optimasi Teknik Isolasi dan Purifikasi DNA yang Efisien dan Efektif pada Kemiri Sunan (*Reutalis Trisperma*). *Jurnal Littri*. 17(1): 11–17.
- Topik H. 2005. Systematic study of subtribe Aeridinae (Orchidaceae). Disertasi The University of Tokyo, Japan.
- Vallad G, Rivkin M, Vallejos C, McClean P. 2001. Cloning and homology modelling of a *Pto*-like protein kinase family of common bean (*Phaseolus vulgaris* L.). *Theoretical and Applied Genetics*. 103:1046–1058
- Vleeshouwers V.G.A.A., Martens A, Van D.W, Colon L.T., Govers F, Kamoun S. 2001. Ancient diversification of the *Pto* kinase family preceded speciation in *Solanum*. *Molecular Plant–Microbe Interactions*. 14: 996–1005.



- Wan, H., Yuan, W., Ruan, M., Ye, Q., Wang, R., Li, Z., Zhou, G., Yao, Z. and Yang, Y., 2013. Identification, phylogeny, and expression analysis of *Pto*-like genes in pepper. *Plant molecular biology reporter*, 31(4): 901-916.
- Wan, H., Yuan, W., Ruan, M., Ye, Q., Wang, R., Li, Z., Zhou, G., Yao, Z. and Yang, Y., 2013. Identification, phylogeny, and expression analysis of *Pto*-like genes in pepper. *Plant molecular biology reporter*, 31(4) : 901-916.
- Widiastoety, D., Solvia, N. and Soedarjo, M., 2010. Potensi anggrek *Dendrobium* dalam meningkatkan variasi dan kualitas anggrek bunga potong. *Jurnal Litbang Pertanian*, 29(3): 101-106.
- Wijayanti, P., Purwestri, Y.A. and Tri Joko, S.P., 2017. Ekspresi gen ketahanan Xa7 pada padi hitam (*Oryza sativa* L.) Setelah infeksi *Xanthomonas oryzae pv oryzae*. Universitas Gadjah Mada. Tesis
- Yang, Z., C. L. Cramer and G. H. Lacy. 1992. *Pectobacterium carotovorum* subsp. *carotovora* pectic enzymes: in planta gene activation and roles in soft rot pathogenesis. *Mol. Plant-Microbe Interact.* 5:104-112.
- Yuwono, T. 2006. Teori dan Aplikasi Polymerase Chain Reaction. Andi Offset, Yogyakarta. p 237
- Zhai, W., Zhao, Y., Zhang, L.X. and Li, X.J., 2014. Structural and phylogenetic analysis of *Pto*-type disease resistance gene candidates in *Hevea brasiliensis*. *Genetics and Molecular Research*, 13(2): 4348-4360.
- Zhang, H. and Wang, S., 2013. Rice versus *Xanthomonas oryzae pv. oryzae*: a unique pathosystem. *Current opinion in plant biology*, 16(2): 188-195.