

## DAFTAR PUSTAKA

- Bautista-Baños, S., M. Hernández-López, E. Bosquez-Molina, dan C. L. Wilson. 2003. Effects of chitosan and plant extracts on growth of *Colletotrichum gloeosporioides*, anthracnose levels and quality of papaya fruit. *Crop Protection*. 22. 1087-1092.
- Brown. T.A. 2006. Gene Cloning and DNA Analysis. 5th Edition. Oxford: Blackwell Publishing. 405 p.
- Brown, T. A. 2010. Gene Cloning and DNA Analysis: An Introduction. John Wiley dan Sons. 376 p.
- Brurberg, M. B., V. G. H. Eijsink, A. J. Haandrikman, G. Venema, dan I. F. Nes. 1995. Chitinase B from *Serratia marcescens* BJL200 is Exported to The Periplasm Without Processing. *Microbiology*. 141. 123-131.
- Brurberg, M. B., I. F. Nes, dan V. G. H. Eijsink. 1996. Comparative studies of chitinases A and B from *Serratia marcescens*. *Microbiology*. 142. 1581-1589.
- Brurberg, M. B., B. Synstad, S. S. Klemsdal, M. F. Daan, V. A. L. Sundheim, dan V. G. H. Eijsink. 2000. Chitinases from *Serratia marcescens*. *Microbiological Research*. 5. 187-204.
- Claverie, J.. dan C. Notredame. 2007. Bioinformatics For Dummies 2nd Edition. Wiley Publishing Inc. 457 p.
- Danişmazoğlu, M., I. Demir, K. Sezen, H. Muratoğlu, dan R. Nalçacıoğlu. 2015. Cloning and Expression of Chitinase A, B, and C (chiA, chiB, chiC) Genes from *Serratia marcescens* Originating from *Helicoverpa armigera* and Determining Their Activities. *Turk J Biol*. 39. 78-87.
- Efri. 2010. Pengaruh Ekstrak Berbagai Bagian Tanaman Mengkudu (*Morinda citrifolia*) Terhadap Perkembangan Penyakit. *J. HPT Tropika*. 10. 52-58.
- Fatihah, R. 2016. Kloning Gen Pengkode Kitinase A (ChiA) dari Isolat Bakteri Rhizosfer (Isolat UBCR\_12) [Skripsi]. Padang. Fakultas Pertanian Universitas Andalas. 53 hal.
- Frankowski, J., M. Lorito, F. Scala, R. Schmid, G. Berg, dan H. Bahl. 2001. Purification and properties of two chitinolytic enzymes of *Serratia plymuthica* HRO-C48. *Arch Microbiol*. 176. 421-426.
- Freeman, S., T. Katan, dan E. Shabi. 1998. Characterization Of *Colletotrichum* Species Responsible For Anthracnose Diseases Of Various Fruits. *Plant Disease*. 82. 596-605.

- Green, M. R., dan J. Sambrook. 2012. *Molecular Cloning: A Laboratory Manual*. Fourth Edition. Cold Spring Harbor Laboratory Press. 34p.
- Herdyastuti, N., T. J. Raharjo, M. Mudasir, dan S. Matsjeh. 2010. Chitinase and Chitinolytic Microorganism: Isolation, Characterization and Potential. *Indonesian Journal of Chemistry*. 9. 37-47.
- Higo, K., Y. Ugawa, M. Iwamoto, dan T. Korenaga. 1999. Plant Cis-Acting Regulatory DNA Elements (PLACE) Database. *Nucleic Acids Res*. 27. 297-300.
- Howard, C. M., dan E. E. Albrechts. 1984. Anthracnose of Strawberry Fruit Caused by *Glomerella cingulata* in Florida. *Plant Disease*. 68. 824-825.
- Innis, M. A., D. H. Gelfand, J. J. Sninsky, dan T. J. White. 2012. *PCR Protocols: A Guide To Methods and Applications*. California: Academic Press. 482 hlm.
- Jamsari. 2007. *Bioteknologi Pemula: Prinsip Prinsip Dasar dan Aplikasi Analisis Molekuler*. Riau: Unri Press. 406 hlm.
- Jamsari. 2013. *Rekayasa Genetika, Untuk Analisis Genom dan Produksi Organisme Transgenik*. Pekanbaru: UR Press. 418 hlm.
- Jones, J. D. G., K. L. Grady, T. V. Suslow, dan J. R. Bedbrook. 1986. Isolation dan characterization of genes encoding two chitinase enzymes from *Serratia marcescens*. *The EMBO journal*. 5. 467-473.
- Kawase, T., A. Saito, T. Sato, R. Kanai, T. Fujii, N. Nikaidou, K. Miyashita, dan T. Watanabe. 2004. Distribution dan Phylogenetic Analysis of Family 19 Chitinases in Actinobacteria. *Applied and Environmental Microbiology*. 70. 1135-1144.
- Kirana, R., K. Kusmana, A. Hasyim, dan R. Sutarya. 2014. Persilangan Cabai Merah Tahan Penyakit Antraknosa (*Colletotrichum acutatum*) in Pepper. *Jurnal Hortikultura*. 24. 189-195.
- Klug, W. S., M. R. Cummings, C. A. Spencer, dan M. A. Palladino. 2012. *Concept of Genetics*. 10<sup>th</sup> ed. Cenveo Publisher Services/Nesbitt Graphics, Inc. 895 p.
- Lubis, A. A. 2016. *Kloning Gen Chitinase C (ChiC) Berbasis PCR dari Bakteri Rhizosfer Isolat UBCR\_12* [Skripsi]. Padang. Fakultas Pertanian Universitas Andalas. 51 hal.
- Maruyama-Nakashita, A., Y. Nakamura, A. Watanabe-Takahashi, E. Inoue, T. Yamaya, dan H. Takahashi. 2005. Identification of a Novel Cis-Acting Element Conferring Sulfur Deficiency Response in *Arabidopsis* Roots. *The Plant Journal*. 42. 305-314.
- Ozgen, A., K. Sezen, I. Demir, Z. Demirbag, dan R. Nalcacioglu. 2013. Molecular Characterization of Chitinase Genes from a Local Isolate of *Serratia*

*marcescens* and Their Contribution to the Insecticidal Activity of *Bacillus thuringiensis* Strains. *Current Microbiology*. 67. 499-504.

Perrakis, A., I. Tews, Z. Dauter, A. B. Oppenheim, I. Chet, K. S. Wilson, dan C. E. Vorgias. 1994. Crystal-Structure of a Bacterial Chitinase at 2.3-angstrom Resolution. *Structure*. 2. 1169-1180.

Prathibha, V. H., A. M. Rao, S. Ramesh, dan C. Nanda. 2013. Estimation Of Fruit Quality Parameters In Anthracnose Infected Chilli Fruits. *International Journal of Agriculture and Food Science Tecnology*. 4. 57-60.

Promega. 2015. pGEM(R)-T and pGEM(R)-T Easy Vector Systems Technical Manual TM042 - pgem-t and pgem-t easy vector systems protocol.pdf. Available at: [https://www.promega.co.uk/~media/files/resources/protocols/technical\\_manuals/0/pgem-t\\_and\\_pgem-t\\_easy\\_vector\\_systems\\_protocol.pdf](https://www.promega.co.uk/~media/files/resources/protocols/technical_manuals/0/pgem-t_and_pgem-t_easy_vector_systems_protocol.pdf).

Promega. 2010. Wizard® Plus SV Minipreps DNA Purification System Wizard® Plus SV Minipreps DNA Purification System. USA. 15 p.

Raven, P. H., dan G. B. Johnson. 2002. Biology. 6<sup>th</sup> ed. McGraw-Hill Company, Inc., New York. 1239 p.

Runia, Yodena Assti. 2008. Faktor-Faktor Yang Berhubungan Dengan Keracunan Pestisida Organofosfat, Karbamat Dan Kejadian Anemia Pada Petani Hortikultura Di Desa Tejosari Kecamatan Ngablak Kabupaten Magelang [Tesis]. Semarang. Program Pascasarjana Universitas Diponegoro. 112 hal.

Sandhya, C., P. Binod, K. M. Nampoothiri, G. Szakacs, dan A. Pandey. 2005. Microbial synthesis of chitinase in solid cultures and its potential as a biocontrol agent against phytopathogenic fungus *Colletotrichum gloeosporioides*. *Applied biochemistry and biotechnology*. 127. 1-15.

Shakhbazau, A. V. dan N. A. Kartel', 2008. Chitinases in bioengineering research. *Russian Journal of Genetics*. 44. 881-889.

Semangun, H. 2000. Penyakit-penyakit Tanaman Perkebunan di Indonesia. UGM Press. Yogyakarta. 808 hlm.

Suryaningsih, K. I., I. M. Sudana, dan I. K. Suada. 2015. Pengendalian Penyakit Antraknosa (*Colletotrichum gloeosporioides* Penz) pada Buah Jeruk Siam (*Citrus nobilis* var . microcarpa) dengan Menggunakan Minyak Atsiri Cengkeh dan Sereh Dapur. *E-Jurnal Agroekoteknologi Tropika*. 4. 16-24.

Suzek, Baris E., M. D. Ermolaeva, M. Schreiber, dan S. L. Salzberg. 2001. A Probabilistic Method for Identifying Start Codons in Bacterial Genomes. *Bioinformatics*. 17. 1123-1130.

Suzuki, K., N. Sugawara, M. Suzuki, dan T. Uchiyama. 2014. Chitinases A , B ,

and C1 of *Serratia marcescens* 2170 Produced by Recombinant *Escherichia coli*: Enzymatic Properties and Synergism on Chitin Degradation. 8451. 1075-1083.

Syafriani, E. 2017. Identifikasi Molekuler, Kloning dan Karakterisasi *In-Silico* Gen-Gen Kitinase dari Beberapa Isolat *Rhizo-* dan *Phylobacteria* Bersifat Antiantraknosa [Disertasi]. Padang. Program Pascasarjana Universitas Andalas. 128 hal.

Syafriani, E., F. Riwany, R. Kamelia, I. Ferita, F. Fatchiyah, dan J. Jamsari. 2016. A promising novel rhizobacteria isolate UBCR\_12 as antifungal for *Colletotrichum gloeosporioides*. *Research Journal of Pharmaceutical, Biological and Chemical Sciences*. 7. 2202-2209.

Tamura, K., G. Stecher, D. Peterson, A. Filipski, dan S. Kumar. 2013. MEGA6: Molecular Evolutionary Genetics Analysis version 6.0. *Molecular Biology and Evolution*. 30. 2725-2729.

Turner, P., A. McLennan, A. Bates, dan M. White. 2005. Molecular Biology. Third Edition. University of Liferpool. UK. *Taylor & Francis Group*. 385p.

Vaaje-Kolstad, G., S. J. Horn, M. Sørleie, dan V. G. H. Eijsink. 2013. The chitinolytic machinery of *Serratia marcescens* – a model system for enzymatic degradation of recalcitrant polysaccharides. *The FEBS Journal*. 280. 3028-3049.

Watford, S. Warrington, S. J. 2018. *Bacterial DNA Mutation*. Diakses di <http://www.ncbi.nlm.gov/books/NBK459274/> pada 9 Januari 2018: 15:50 WIB.

Wiyono, S. 2007. Perubahan Iklim dan Ledakan Hama dan Penyakit Tanaman. Makalah dalam Seminar Sehari tentang Keanekaragaman Hayati Ditengah Perubahan Iklim oleh KEHATI. Diakses di <http://repository.ipb.ac.id/handle/123456789/30756> pada 6 Maret 2017: 11.09 WIB.

Yusuf, Z. K. 2010. Polymerase Chain Reaction. *Saintek* (5). 6 p.

Zhong, X., L. Xi, Q. Lian, X. Lou, Z. Wu, S. Seng, X. Yuan, dan M. Yi. 2015. The NPR1 Homolog GhNPR1 Plays an Important Role in The Defense Response of *Gladiolus hybridus*. *Plant Cell Repotr*s. 34. 1063-1074.