

DAFTAR PUSTAKA

- Abidin, Z., L. Q. Aini dan A. L. Abadi. 2015. Pengaruh Bakteri *Bacillus* sp. dan *Pseudomonas* sp. Terhadap Pertumbuhan Jamur Patogen *Sclerotium rolfsii* Sacc. penyebab penyakit rebah semai pada tanaman kedelai. *Jurnal Hama dan Penyakit Tumbuhan* 3:1-10.
- Abdulkhair, W.M., dan M. A. Alghuthaymi. 2016. Plant Pathogens. Intech open. São Paulo State University. Brazil. 193 hal.
- Adesegun, E., E. Ajayi, O. Adebayo, A. Akintokun dan O. Enikuomihin. 2012. Effect of *Ocimum gratissimum* (L.) and *Aframomum melegueta* (K. Schum.) Extracts On The Growth of *Sclerotium rolfsii* (Sacc.). *International. Journal. Plant Pathology* 3: 74-81.
- Agrawal, A. H. dan P. B. Chauhan. 2016. Effect Of Cultivation Media Components On Pyocyanin Production And Its Application In Antimicrobial Property. *The Plant Cell* 21: 1-12.
- Agrios, G. 2005. Plant Diseases Caused by Fungi. *Plant pathology*, San Diego, United States. 952 hal
- Ahlem, H., E. Mohammed, A. Badoc dan L. Ahmed. 2012. Effect of pH, Temperature And Water Activity on The Inhibition of *Botrytis cinerea* by *Bacillus amyloliquefaciens* Isolates. *African Journal of Biotechnology* 11:2210-2217.
- Ahmadzadeh, M., H. Afsharmanesh, M. Javan-Nikkhah dan A. Sharifi-Tehrani. 2006. Identification of Some Molecular Traits in Fluorescent Pseudomonads with Antifungal Activity. *Iranian Journal of Biotechnology* 4: 245-253.
- Ahman, J. 2000. Extracellular Serine Proteases As Virulence Factors In Nematophagous Fungi: Molecular Characterization and Functional Analysis of The PII Protease in *Arthrobotrys oligospora*, Microbial Ecology, Lund University. 567 hal.
- Alabouvette, C., C. Olivain., Q. Migheli., dan C. Steinberg. 2009. Microbiological Control of Soil-Borne Phytopathogenic Fungi with Special Emphasis on Wilt-Inducing *Fusarium oxysporum*. *New Phytologist* 184: 529-544.
- Aisyah, S. N. 2017. Studi Proteomik Bakteri Penghasil Senyawa Antiantraknosa selama Proses Produksi Metabolitnya. [Disertasi]. Padang Universitas Andalas. 154 hal
- Aisyah, S. N., H. Harnas, S. Sulastri, R. Retmi, H. Fuaddi, F. Fatchiyah, A. Bakhtiar dan J. Jamsari. 2016. Enhancement of a Novel Isolate of *Serratia*

plymuthica as Potential Candidate for an Antianthraxnose. *Pakistan Journal of Biological Sciences* 19: 250-258.

- Aisyah, S. N., S. Sulastri, R. Retmi, R. H. Yani, E. Syafriani, L. Syukriani, F. Fatchiyah, A. Bakhtiar dan J. Jamsari. 2017. Suppression of *Colletotrichum gloeosporioides* by Indigenous Phyllobacterium and its Compatibility with Rhizobacteria. *Asian Journal of Plant Pathology* 11: 139-147.
- Ajit, N. S., R. Verma dan V. Shanmugam. 2006. Extracellular Chitinases of Fluorescent Pseudomonads Antifungal to *Fusarium oxysporum* f. sp. *dianthi* causing Carnation Wilt. *Current Microbiology* 52: 310-316.
- Akram, A., S. M. Iqbal, R. A. Qureshi dan C. A. Rauf. 2008. Variability Among Isolates of *Sclerotium rolfsii* Associated With Collar Rot Disease of Chickpea in Pakistan. *Pakistan Journal of Botany* 40: 453.
- Ashwini, N. dan S. Srividya. 2014. Potentiality of *Bacillus subtilis* as Biocontrol Agent For Management Of Anthracnose Disease Of Chilli Caused by *Colletotrichum gloeosporioides* OGC1. *3 Biotech* 4: 127-136.
- Augustine, S., S. Bhavsar dan B. Kapadnis. 2005. Production of A Growth Dependent Metabolite Active Against Dermatophytes by *Streptomyces rochei* AK 39. *Indian Journal of Medical Research* 121: 164.
- Bailey, K. dan G. Lazarovits. 2003. Suppressing Soil-Borne Diseases With Residue Management and Organic Amendments. *Soil and Tillage Research* 72: 169-180.
- Baminger, U., S.S. Subramaniam, V. Renganathan, dan D. Haltrich. 2001. Purification and Characterization of Cellobiose Dehydrogenase From the Plant Pathogen *Sclerotium (Athelia) rolfsii*. *Applied Environment Microbiology* 67: 176-1774.
- Baranyi, J. dan T. Roberts. 2000. Principles and Application of Predictive Modeling of The Effects of Preservative Factors on Microorganisms. *The microbiological safety and quality of food*. Aspen, Gaithersbur 81: 342-358.
- Benhamou, N., S. Gagné, D. Le Quéré dan L. Dehbi. 2000. Bacterial-Mediated Induced Resistance in cucumber: Beneficial Effect of The Endophytic Bacterium *Serratia plymuthica* on the Protection Against Infection by *Pythium ultimum*. *Phytopathology* 90: 45-56.
- Berg, G. 2000. Diversity of Antifungal and Plant-Associated *Serratia plymuthica* Strains. *Journal of applied microbiology* 88: 952-960.
- Bhattacharjee, R. dan U. Dey. 2014. An Overview of Fungal and Bacterial Biopesticides To Control Plant Pathogens/Diseases. *African Journal of Microbiology Research* 8: 1749-1762.

- Bibb, M. J. 2005. Regulation of Secondary Metabolism in *Streptomyces*. *Current opinion in microbiology* 8: 208-215.
- Bloemberg, G. V. dan B. J. Lugtenberg. 2001. Molecular Basis of Plant Growth Promotion and Biocontrol by Rhizobacteria. *Current Opinion in Plant Biology* 4: 343-350.
- Brandl, M.T., B.Quinones, dan S. E. Lindow. 2001. Heterogeneous Transcription of an *Indole-3-Acetic Acid* Biosynthetic Gene in *Erwinia herbicola* on Plant Surfaces. *Journal of Applied Microbiology* 98: 3454–3459.
- Cannon, P., U. Damm, P. Johnston dan B. Weir 2012. *Colletotrichum* Current Status and Future Directions. *Studies in Mycology* 73: 181-213.
- Czajkowski, R., W. De Boer, J. Van Veen dan J. Van der Wolf. 2012. Studies on the Interaction Between the Biocontrol Agent, *Serratia plymuthica* A30, and Blackleg-Causing *Dickeya* sp. (biovar 3) in Potato (*Solanum tuberosum*). *Plant Pathology* 61: 677-688.
- Davis, K. E., S. J. Joseph dan P. H. Janssen. 2005. Effects of Growth Medium, Inoculum Size, and Incubation Time on Culturability and Isolation of Soil Bacteria. *Applied and Environmental Microbiology* 71: 826-834.
- Dean, R., J. A. V. Kan, Z. A. Pretorius, K. E. H. Kosack, A. D. Pietro, P. D. Spanu, J. J. Rudd, M. Dickman, R. Kahmann dan J. Ellis. 2012. The Top 10 Fungal Pathogens in Molecular Plant Pathology. *Molecular Plant Pathology* 13: 414-430.
- De Vleeschauwer, D. dan M. Hofte 2007. Using *Serratia plymuthica* to Control Fungal Pathogens of Plants. *Applied and Environmental Microbiology* 2: 1–12.
- Dean, R., J. A. Van Kan, Z. A. Pretorius, K. E. Hammond-Kosack, A. Di Pietro, P. D. Spanu, J. J. Rudd, M. Dickman, R. Kahmann dan J. Ellis. 2012. The Top 10 Fungal Pathogens in Molecular Plant Pathology. *Molecular Plant Pathology* 13: 414-430.
- Dekkers, L. C., I. H. Mulders, C. C. Phoelich, T. F. Chin-A-Woeng, A. H. Wijfjes dan B. J. Lugtenberg. 2000. The Colonization Gene of the Tomato-*Fusarium oxysporum* f. sp. *radicis-lycopersici* Biocontrol Strain *Pseudomonas fluorescens* WCS365 Can Improve Root Colonization Of Other Wild-Type *Pseudomonas* spp. Bacteria. *Molecular Plant-Microbe Interactions* 13: 1177-1183.
- Dey, R., K. Pal, D. Bhatt dan S. Chauhan. 2004. Growth Promotion and Yield Enhancement of Peanut (*Arachis hypogaea* L.) by Application of Plant Growth-Promoting Rhizobacteria. *Microbiological Research* 159: 371-394.

- Dubey, S.C., S. Birendra. 2004. Reaction of Chickpea Genotypes Against *Fusarium oxysporum* f. sp. *ciceri* Causing Vascular Wilt. *Indian Phytopathology* 57: 233.
- Dubey, S., S. R. Singh dan B. Singh. 2010. Morphological and Pathogenic Variability of Indian Isolates of *Fusarium oxysporum* f. sp. *ciceris* Causing Chickpea Wilt. *Archives of Phytopathology and Plant Protection* 43: 174-190.
- Duncan, D. B. 1955. Multiple Range and Multiple F tests. *Biometrics* 11: 1-42.
- Elad, Y. dan A. Stewart. 2007. Microbial Control of *Botrytis* spp. *Botrytis: Biology, Pathology and Control*. *Springer* 10: 223-241.
- El-Katatny, M., M. Gudelj, K.-H. Robra, M. Elnaghy dan G. Gübitz. 2001. Characterization of a Chitinase and an *Endo- β -1, 3-glucanase* from *Trichoderma harzianum* Rifai T24 Involved in Control of the Phytopathogen *Sclerotium rolfsii*. *Applied Microbiology and Biotechnology* 56: 137-143.
- Erlacher, A., M. Cardinale, R. Grosch, M. Grube dan G. Berg. 2014. The Impact of the Pathogen *Rhizoctonia solani* and its Beneficial Counterpart *Bacillus Amyloliquefaciens* on the Indigenous Lettuce Microbiome. *Frontiers in Microbiology* 5: 175.
- Faith, J. J., B. Hayete, J. T. Thaden, I. Mogno, J. Wierzbowski, G. Cottarel, S. Kasif, J. J. Collins dan T. S. Gardner. 2007. Large-scale Mapping and Validation of *Escherichia coli* Transcriptional Regulation from A Compendium of Expression Profiles. *Archives of Phytopathology and Plant Protection* 5:8.
- Finkel, S. E. 2006. Long-term Survival During Stationary Phase: Evolution and the GASP Phenotype. *Nature Reviews Microbiology* 4: 113.
- 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. *Archives of Microbiology* 176: 421-426.
- Fuaddi, H. 2016. Efektivitas Formulasi Senyawa Ekstraseluler dan Intraseluler Bakteri Isolat UBCR_12 dalam Menekan Jamur *Colletotrichum gloeosporioides* secara *in-vitro*. [Skripsi]. Padang. Universitas Andalas. 54 hal.
- Gangadevi, V. dan J. Muthumary. 2008. Isolation of *Colletotrichum gloeosporioides*, a Novel Endophytic Taxol-Producing Fungus From The Leaves of A Medicinal Plant, *Justicia gendarussa*. *Mycologia Balcanica* 5: 1-4.
- Gaur, A. S. dan S. S. Gaur 2006. *Statistical Methods for Practice and Research: A Guide to Data Analysis Using SPSS*, Sage. 172 hal.

- Gerhardson, B. 2002. Biological Substitutes for Pesticides. *Trends in biotechnology* 20b 338-343.
- Gkarmiri, K., R. D. Finlay, S. Alström, E. Thomas, M. A. Cubeta dan N. Högberg. 2015. Transcriptomic Changes in the Plant Pathogenic Fungus *Rhizoctonia solani* AG-3 in Response to the Antagonistic Bacteria *Serratia proteamaculans* and *Serratia plymuthica*. *BMC genomics* 16: 630.
- Haas, D. dan G. Défago. 2005. Biological Control of Soil-Borne Pathogens by Fluorescent Pseudomonads. *Nature Reviews Microbiology* 3: 307-319.
- Haggag, W. M. dan M. A. El Soud. 2012. Production and Optimization of *Pseudomonas fluorescens* Biomass and Metabolites for Biocontrol of Strawberry Grey Mould. *American Journal of Plant Sciences* 3: 836.
- Huang, C.-J., T.-K. Wang, S.-C. Chung dan C.-Y. Chen. 2005. Identification of An Antifungal Chitinase From A Potential Biocontrol Agent, *Bacillus cereus* 28-9. *BMB Reports* 38:82-88.
- Husada, E. D. 2015. Dinamika Profil Proteom Bakteri Isolat UBCR_012 Selama Ko-Kultur Dengan Jamur *Colletrothicum gloeosporioides*. [Tesis]. Padang. Universitas Andalas. 54 hal.
- Islam, M., Y. T. Jeong, Y. S. Lee dan C. H. Song. 2012. Isolation and Identification of Antifungal Compounds From *Bacillus subtilis* C9 Inhibiting The Growth of Plant Pathogenic Fungi. *Mycobiology* 40: 59-66.
- Ismet, A., S. Vikineswary, S. Paramaswari, W. Wong, A. Ward, T. Seki, H. Fiedler dan M. Goodfellow. 2004. Production and Chemical Characterization of Antifungal Metabolites From *Micromonospora* sp. M39 Isolated From Mangrove Rhizosphere Soil. *World Journal of Microbiology and Biotechnology* 20: 523-528.
- Janssen, P. H., P. S. Yates, B. E. Grinton, P. M. Taylor dan M. Sait. 2002. Improved Culturability of Soil Bacteria and Isolation in Pure Culture of Novel Members of The Divisions Acidobacteria, Actinobacteria, Proteobacteria, and Verrucomicrobia. *Applied and Environmental Microbiology* 68: 2391-2396.
- Kamensky, M., M. Ovadis, I. Chet dan L. Chernin. 2003. Soil-borne Strain IC14 of *Serratia plymuthica* with Multiple Mechanisms of Antifungal Activity Provides Biocontrol of *Botrytis cinerea* and *Sclerotinia sclerotiorum* diseases. *Soil Biology and Biochemistry* 35: 323-331.
- Kamilova, F., L. V. Kravchenko, A. I. Shaposhnikov, N. Makarova dan B. Lugtenberg. 2006. Effects of The Tomato Pathogen *Fusarium oxysporum* f. sp. *radicis-lycopersici* and of the Biocontrol Bacterium *Pseudomonas fluorescens* WCS365 on the Composition of Organic Acids and Sugars in

Tomato Root Exudate. *Molecular plant-microbe interactions* 19: 1121-1126.

Koche, M. D., R. Gade dan A. Deshmukh. 2013. Antifungal Activity of Secondary Metabolites Produced by *Pseudomonas fluorescens*. *The Bioscan* 8: 723-726.

Koo, S.-Y. dan K.-S. Cho. 2009. Isolation and Characterization of A Plant Growth Promoting Rhizobacterium, *Serratia* sp. SY5. *Journal of Microbiology and Biotechnology* 19: 1431-1438.

Kumar, P. G., S. M. H. Ahmed, S. Desai, E. L. D. Amalraj dan A. Rasul. 2014. In vitro Screening for Abiotic Stress Tolerance in Potent Biocontrol and Plant Growth Promoting Strains of *Pseudomonas* and *Bacillus* spp. *International Journal of Bacteriology* 2: 6.

Kurbanoglu, E. B., M. Ozdal, O. G. Ozdal, O. F. Algur. 2015. Enhanced Production of Prodigiosin by *Serratia Marcescens* MO-1 Using Ram Horn Peptone. *Brazilian Journal of Microbiology* 46:631-637.

Kurze, S., H. Bahl, R. Dahl dan G. Berg. 2001. Biological Control of Fungal Strawberry Diseases by *Serratia plymuthica* HRO-C48. *Plant disease* 85: 529-534.

Li, P., A. H. Kwok, J. Jiang, T. Ran, D. Xu, W. Wang dan F. C. Leung. 2015. Comparative Genome Analyses of *Serratia marcescens* FS14 Reveals Its High Antagonistic Potential. *PLoS One* 10: 143-150.

Liu, X., M. Bimerew, Y. Ma, H. Müller, M. Ovadis, L. Eberl, G. Berg dan L. Chernin. 2007. Quorum-sensing Signaling is Required for Production of the Antibiotic Pyrrolnitrin in a Rhizospheric Biocontrol Strain of *Serratia plymuthica*. *FEMS microbiology letters* 270: 299-305.

Lugtenberg, B. dan F. Kamilova. 2009. Plant Growth Promoting *Rhizobacteria*. *Annual Review of Microbiology* 63: 541-556.

Marimuthu, S., V. Ramamoorthy, R. Samiyappan dan P. Subbian. 2013. Intercropping System with Combined Application of *Azospirillum* and *Pseudomonas fluorescens* Reduces Root Rot Incidence Caused by *Rhizoctonia bataticola* and Increases Seed Cotton Yield. *Journal of Phytopathology* 161: 405-411.

Michielse, C. B. dan M. Rep. 2009. Pathogen Profile Update: *Fusarium oxysporum*. *Molecular Plant Pathology* 10: 311-324.

Minglian, Z., M. Minghe dan Z. Keqin. 2004. Characterization of a Neutral Serine Protease and Its Full-Length cDNA from the Nematode-Trapping Fungus *Arthrobotrys oligospora*. *Mycologia* 96: 16-22.

- Monod, M., S. Capoccia, B. Léchenne, C. Zaugg, M. Holdom dan O. Jousson. 2002. Secreted Proteases from Pathogenic Fungi. *International Journal of Medical Microbiology* 292: 405-419.
- Moriwaki, J., T. Sato dan T. Tsukiboshi. 2003. Morphological and Molecular Characterization of *Colletotrichum boninense* sp. nov. from Japan. *Mycoscience* 44: 47-53.
- Mukerji, K. dan A. Ciancio 2007. Mycorrhizae in the Integrated Pest and Disease Management. *General Concepts in Integrated Pest and Disease Management. Springer* 34: 223-232.
- Mukherjee, G. dan S. Sen. 2006. Purification, Characterization, and Antifungal Activity of Chitinase from *Streptomyces venezuelae* P10. *Current microbiology* 53: 265-269.
- Müller, T., U. Behrendt, S. Ruppel, G. von der Waydbrink dan M. E. Müller. 2016. Fluorescent Pseudomonads in the Phyllosphere of Wheat: Potential Antagonists Against Fungal Phytopathogens. *Current microbiology* 72: 383-389.
- Mustika, M. 2017. Uji Kombinasi Senyawa Ekstrak Intraseluler Empat Isolat Bakteri (UBCR_12, UBCR_36, UBCF_01, dan UBCF_13/-R_36) terhadap Jamur *Colletotrichum gloeosporioides* secara *in-vitro*. [Skripsi]. Padang. Universitas Andalas. 60 hal.
- Nasikhah, K. 2008. Pengaruh Isolat Alami *Pseudomonas fluorescens* pada Beberapa Tingkat Pengenceran Terhadap Jamur *Sclerotium rolfsii* Penyakit Layu Pada Kedelai (*Glycine max* (L) Merrill). Universitas Islam Negeri Maulana Malik Ibrahim. 65 hal.
- Navarro Lorens, J. M., A. Tormo dan E. Martínez-García. 2010. Stationary Phase in Gram-Negative Bacteria. *FEMS microbiology reviews* 34: 476-495.
- Onbasli, D. dan B. Aslim. 2008. Determination of Antimicrobial Activity and Production of Some Metabolites by *Pseudomonas aeruginosa* B1 and B2 in Sugar Beet Molasses. *African Journal of Biotechnology* 7: 53-60.
- Oskay, M., A. Ü. Tamer dan C. Azeri. 2004. Antibacterial Activity of Some Actinomycetes Isolated from Farming Soils of Turkey. *African Journal of Biotechnology* 3: 441-446.
- Oskay, M. 2011. Effects of some Environmental Conditions on Biomass and Antimicrobial Metabolite Production by *Streptomyces* Sp., KGG32. *International Journal of Agriculture & Biology* 13: 89-95.
- Pal, K. K. dan B. M. Gardener. 2006. Biological Control of Plant Pathogens. *The Plant Health Instructor* 2: 1117-1142.

- Patil, P. D., S. Mehetre, V. Mandare dan G. Dake. 2005. Pathogenic Variation Among *Fusarium* Isolates Associated with Wilt of Chickpea (*Cicer arietinum* L.). *Annals of Plant Protection Sciences* 13: 427-430.
- Photita, W., P. W. Taylor, R. Ford, K. D. Hyde dan S. Lumyong. 2005. Morphological and Molecular Characterization of *Colletotrichum* Species from Herbaceous Plants in Thailand. *Fungal Diversity* 2: 45-56.
- Pietro, A. D., M. P. Madrid, Z. Caracuel, J. Delgado-Jarana dan M. I. G. Roncero. 2003. *Fusarium oxysporum*: Exploring The Molecular Arsenal of A Vascular Wilt Fungus. *Molecular Plant Pathology* 4: 315-325.
- Ploetz, R. C. 2006. *Fusarium* Wilt of Banana is Caused By Several Pathogens Referred To As *Fusarium oxysporum* f. sp. *cubense*. *Phytopathology* 96: 653-656.
- Prapagdee, B., C. Kuekulvong dan S. Mongkolsuk. 2008. Antifungal Potential of Extracellular Metabolites Produced by *Streptomyces hygrosopicus* Against Phytopathogenic Fungi. *International Journal of Biological Sciences* 4: 330.
- Poonpolgul, S. 2007. Chili Pepper Anthracnose in Thailand. The First International Symposium on Chili Anthracnose, Convention Center, Seoul National University, Korea 23: 333-338.
- Retmi. 2016. Uji Kombinasi Senyawa Ekstraseluler Empat Isolat Bakteri Antagonis terhadap Jamur *Colletotrichum gloeosporioides* secara *in-vitro*. [Skripsi]. Padang. Univeristas Andalas. 47 hal.
- Rolfe, M. D., C. J. Rice, S. Lucchini, C. Pin, A. Thompson, A. D. S. Cameron, M. Alston, M. F. Stringer, R. P. Betts, J. Baranyi, M. W. Peck dan J. C. D. Hinton. 2012. Lag Phase Is a Distinct Growth Phase That Prepares Bacteria for Exponential Growth and Involves Transient Metal Accumulation. *Journal of Bacteriology* 194: 686-701.
- Romero, F. J., L. A. García, J. A. Salas, M. Díaz dan L. M. Quirós. 2001. Production, Purification and Partial Characterization of Two Extracellular Proteases From *Serratia marcescens* Grown in Whey. *Process biochemistry* 36: 507-515.
- Ruiz, B., A. Chávez, A. Forero, Y. García-Huante, A. Romero, M. Sánchez, D. Rocha, B. Sánchez, R. Rodríguez-Sanoja dan S. Sánchez. 2010. Production of Microbial Secondary Metabolites: Regulation by the Carbon Source. *Critical Reviews in Microbiology* 36: 146-167.
- Rustati, R. 2004. Pengendalian *Fusarium oxysporum* Schlecht. f. sp. *Zingiberi Trujillo* pada Tanaman Jahe dengan Disinvestasi Tanah secara Hayati. 259-267. Dalam: Soesanto L, eds. Prosiding Symposium Nasional I Tentang *Fusarium* 26-27.

- Saha, S., R. Thavasi dan S. Jayalakshmi. 2008. Phenazine Pigments From *Pseudomonas aeruginosa* and Their Application as Antibacterial Agent and Food Colourants. *Research Journal Microbiology* 3: 122-128.
- Sahitya, U. L., S. Deepthi, P. Kasim, P. Suneetha dan M. Krishna. 2014. Anthracnose, a Prevalent Disease in *Capsicum*. *Research Journal of Pharmaceutical, Biological and Chemical Sciences* 5: 1583-1604.
- Sanchez, S., A. Chávez, A. Forero, Y. García-Huante, A. Romero, M. Sánchez, D. Rocha, B. Sánchez, M. Ávalos dan S. Guzmán-Trampe. 2010. Carbon Source Regulation of Antibiotic Production. *The Journal of antibiotics* 63: 442.
- Saputra, W. 2015. Aktivitas Antagonistik Bakteri Isolat UBCR_036 dan UBCF_013 Pada Berbagai pH Selama Ko-Kultur Dengan Jamur *Colletrothicum gloeosporioides*. [Tesis]. Padang: Universitas Andalas. 67 hal.
- Sato, I., S. Yoshida, Y. Iwamoto, M. Aino, M. Hyakumachi, M. Shimizu, H. Takahashi, S. Ando dan S. Tsushima. 2014. Suppressive Potential of *Paenibacillus* strains Isolated From The Tomato Phyllosphere Against *Fusarium* Crown and Root Rot of Tomato. *Microbes and environments*, 13172-13182.
- Sastrahidayat, I.R., S. Djauhari, B. Prasetya, dan N. Saleh. 2011. Biocontrol of Damping-Off Disease (*Sclerotium rolfsii* Sacc.) Using Actinomycetes and Vam Fungi on Soybean and Impact to Crop Production and Microorganism Diversity in Rhizosfer Zone. *International Journal of Academic Research* 3: 114-119.
- Shoda, M. 2000. Bacterial Control of Plant Disease. *Journal of Bioscience and Bioengineering* 89: 515-512.
- Sayed, R., M. Badgajar, H. Sonawane, M. Mhaske dan S. Chincholkar. 2005. Production of Microbial Iron Chelators (Siderophores) By Fluorescent Pseudomonads. *The Journal of Antibiotics* 5: 189-195.
- Semangun, H. 2000. Pengantar Ilmu Penyakit Tanaman Perkebunan di Indonesia. Gajah Mada University Press, Yogyakarta. 130 hal.
- Semangun, H. 2004. Diseases of food crops in Indonesia. *Third printing*. Gadjah Mada University Press, Yogyakarta. 126 hal.
- Sezonov, G., D. Joseleau-Petit dan R. D'Ari. 2007. *Escherichia coli* Physiology in Luria-Bertani Broth. *Journal of bacteriology* 189: 8746-8749.
- Shahitha, S. dan K. Poornima. 2012. Enhanced Production of Prodigiosin Production in *Serratia marcescens*. *Journal of Applied Pharmaceutical Science* 2: 138.

- Sharma, S., M. Kaur dan D. Prashad. 2014. Isolation of Fluorescent *Pseudomonas* Strain From Temperate Zone of Himachal Pradesh and Their Evaluation As Plant Growth Promoting Rhizobacteria (PGPR). *The Bioscan* 9: 323-328.
- Shen, S. S., O. H. Choi, S. H. Park, C. G. Kim dan C. S. Park. 2005. Root Colonizing and Biocontrol Competency of *Serratia plymuthica* A21-4 Against *Phytophthora* Blight of Pepper. *The Plant Pathology Journal* 21: 64-67.
- Singh, L., S. Mazumder dan T. Bora. 2009. Optimisation of Process Parameters for Growth and Bioactive Metabolite Produced by A Salt-Tolerant and Alkaliphilic Actinomycete, *Streptomyces tanashiensis* strain A2D. *Journal of Medical Mycology* 19: 225-233.
- Someya, N., N. Kataoka, T. Komagata, K. Hirayae, T. Hibi dan K. Akutsu. 2000. Biological Control of Cyclamen Soilborne Diseases by *Serratia marcescens* strain B2. *Plant Disease* 84: 334-340.
- Stockwell, V., K. Johnson, D. Sugar dan J. Loper. 2011. Mechanistically Compatible Mixtures of Bacterial Antagonists Improve Biological Control of Fire Blight of Pear. *Phytopathology* 101: 113-123.
- Sulastri. 2017. Uji Potensi Antagois Bakteri Antiantraknosa Terhadap Beberapa Jamur Fitopatogen. [Tesis]. Padang Universitas Andalas. 73 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.
- Than, P. P., H. Prihastuti., S. Phoulivong, P.W.J Taylor dan K.D. Hyde. 2008. Chili Anthracnose Disease Caused by *Colletotrichum* spesies. *Science Biology* 9: 764-778.
- Thaning, C., C. J. Welch, J. J. Borowicz, R. Hedman dan B. Gerhardson. 2001. Suppression of *Sclerotinia sclerotiorum* Apothecial Formation by The Soil Bacterium *Serratia plymuthica*: Identification of A Chlorinated Macrolide As One of The Causal Agents. *Soil Biology and Biochemistry* 33: 1817-1826.
- Tomás, J., J. Árvay dan T. Tóth. 2012. Heavy Metals in Productive Parts of Agricultural Plants. *The Journal of Microbiology, Biotechnology and Food Sciences* 1: 819.
- Tran, D. M., H. Sugimoto, D. A. Nguyen, T. Watanabe dan K. Suzuki. 2018. Identification and Characterization of Chitinolytic Bacteria Isolated From A Freshwater Lake. *Bioscience, biotechnology, and biochemistry* 82: 343-355.

- Van der Weerden, N.L., F.T. Lay, dan M.A. Anderson. 2013. Properties and Mechanisms of Action of Naturally Occuring Antifungal Peptides. *Celuller and Moleculer Life Sciences* 283: 14445-14452.
- Vorholt, J. A. 2012. Microbial Life in The Phyllosphere. *Nature Reviews Microbiology* 10: 828.
- Webster, J. dan R. Weber 2007. Introduction to Fungi. Cambridge University Press. 78 hal.
- Wei, B. dan L. Yang. 2010. A Review of Heavy Metal Contaminations in Urban Soils, Urban Road Dusts and Agricultural Soils from China. *Microchemical Journal* 94: 99-107.
- Welbaum, G. E., A. V. Sturz, Z. Dong dan J. Nowak. 2004. Managing Soil Microorganisms to Improve Productivity of Agro-Ecosystems. *Critical Reviews in Plant Sciences* 23: 175-193.
- Wilson, P., D. Wilson, T. Brocklehurst, H. Coleman, G. Mitchell, C. Waspe, S. Jukes dan M. Robins. 2003. Batch Growth of *Salmonella typhimurium* LT2: Stoichiometry and Factors Leading to Cessation of Growth. *International Journal of Food Microbiology* 89: 195-203.
- Yani, R. H. 2012. Seleksi Bakteri Antagonis Dari Tanaman Sawi (*Brassica juncea*. L) Sebagai Biofungisida Terhadap *Colletrothicum gloeosporioides* Penyebab Antraknosa Pada tanaman Cabai (*Capsicum annum*). [Skripsi]. Padang. Universitas Andalas. 59 hal
- Yilmaz, M., H. Soran dan Y. Beyatli. 2006. Antimicrobial Activities of Some *Bacillus* spp. Strains Isolated From The Soil. *Microbiological Research* 161: 127-131.
- Zhao, X., X. Zhao, Y. Wei, Q. Shang dan Z. Liu. 2013. Isolation and identifications of a Novel Antifungal Protein From a Rhizobacterium *Bacillus subtilis* strain F3. *Journal Phytopathology* 161: 43-48.