



## DAFTAR PUSTAKA

- Ahn JH, Nam KB, Ka JO. 2008. Department of Agricultural Biotechnology, Seoul National University, San 56-1 Sillimdong Kwanakgu, Seoul 151-742, Korea.
- Alexander DB, Zuberer DA. 1991. Use of chrome azurol S reagents to evaluate siderophore production by rhizosphere bacteria. *Biol Fertil Soils* 12: 39-45.
- Alvarez MAB, Gagne G, Antoun H. 1994. Effect of compost on rhizosphere microflora of the tomato and on the incidence of plant growth-promoting rhizobacteria. *Appl Environ Microbiol* 61: 194-199.
- Angulló JA. 2001. Caracterització de metabolits produïts per soques de *Pseudomonas fluorescens* efectives en control biològic de fongs fitopatògens. [Tesis Doctoral]. Girona: Departament d'Enginyeria Química, Agrària i Tecnologia Agroalimentària. Institut de Tecnologia Agroalimentària. Universitat de Girona.
- Arjajiah V, Koedam N, Nawak-Thompson B, Loper JE, Höfte M, Tambong JT, Cornelis P. 1998. Involvement of phenazines and anthranilate in the antagonism of *Pseudomonas aeruginosa* PNA1 and Tn5 derivatives toward *Fusarium spp* and *Pythium spp*. *Mol Plant Microbe Interact* 11: 847-854.
- Arima K, Imanaka H, Kousaka M, Fukuda A, Tamura G. 1964. Pyrrolnitrin, a new antibiotic substance, produced by *Pseudomonas*. *Agric Biol Chem* 28: 575-576.
- Bakker PAHM, Pieterse CJM, van Loon LC. 2007. Induced systemic resistance by fluorescent *Pseudomonas spp*. *Phytopathology* 97: 239-243.
- Balai Penelitian Tanaman Kacang-kacangan dan Umbi-umbian. 2005. Hama dan penyakit kedelai penting dan potensi agensia hayati di Jawa Timur. <http://balitkabi.litbang.deptan.go.id/id/kedelai/hama-dan-penyakit-kedelai-penting-dan-potensi-agensia-hayati-di-jawa-timur> [9 Maret 2011].
- Balai Penelitian Tanaman Kacang-kacangan dan Umbi-umbian. 2011. Teknologi produksi kedelai untuk lahan sawah, lahan kering masam dan lahan pasang surut tipe C dan D. <http://balitkabi.litbang.deptan.go.id/id/teknologi-produksi-kabi/teknologi-produksi-kedelai/semua-halaman> [9 Maret 2011].
- Balai Pengkajian Teknologi Pertanian, Sumatra Utara. 2009. Pengelolaan Tanaman Sumberdaya Terpadu Kedelai. <http://sumut.litbang.deptan.go.id/ind/index.php/component/content/article/15-benih/4-pengelolaan-tanaman-sumberdaya-terpadu-kedelai> [9 Maret 2011].



- Bangera MG, Thomashow LS. 1999. Identification and characterization of a gene cluster for synthesis of the polyketide antibiotic 2,4-diacetylphloroglucinol from *Pseudomonas fluorescens* Q2-87. *J Bacteriol* 181: 3155-3163.
- Barea JM, Pozo MJ, Azcón R, Azcón-Aguilar C. 2005. Microbial co-operation in the rhizosphere. *Experiment Bot* 56: 1761-1778.
- Bergsma-Vlami M, Prins ME, Staats M, Raaijmakers JM. 2005. Assessment of genotypic diversity of antibiotic-producing *Pseudomonas* species in the rhizosphere by denaturing gradient gel electrophoresis. *Appl Environ Microbiol* 71: 993-1003.
- Bharadwaj DP, Lundquist PO, Persson P, Alstrom S. 2008. Evidence for specificity of cultivable bacteria associated with arbuscular mycorrhizal fungal spores. *FEMS Microbiol Ecol* 65: 310-322
- Bloemberg GV, Lugtenberg BJ. 2001. Molecular basis of plant growth promotion and biocontrol by rhizobacteria. *Curr Opin Plant Biol* 4: 343-350.
- Blum C, Haas D. 2000. Mechanism, regulation, and ecological role of bacterial cyanide biosynthesis. *Arch Microbiol* 173 :170-177.
- Boerema M, Bom P, Kindt F, Keurentjes JJB, Sluis van der I, Loon van LC, Bakker PAHM. 2003. Control of fusarium wilt of radish by combining *Pseudomonas putida* strains that have different disease-suppressive mechanisms. *Phytopatology* 93: 626-632.
- Bonsall RF, Weller DM, Thomashow LS. 1997. Quantification of 2,4-diacetylphloroglucinol produced by fluorescent *Pseudomonas* spp. in vitro and in the rhizosphere of wheat. *Appl Environ Microbiol* 63: 951-955.
- Bosshard PP, Abels S, Zbinden R, Böttger EC, Altwegg. 2003. Ribosomal DNA sequencing for identification of aerobic Gram-positive rods in the clinical laboratory (an 18-Month Evaluation). *J Clin Microbiol* 41: 4134-4140.
- Bradley CA. 2003. Seed treatments of soybeans. North Dakota State University. <http://www.ndsu.edu/pubweb/~bernelso/soydiseases/treatments.shtml> [25 Maret 2011]
- Brown TA. 1986. *Gene cloning an introduction*. Berkshire, England: Van Nostrand Reinhold. p 63.
- Büttner G, Pfahler B, Märlander B. 2004. Greenhouse and field technique for testing sugar beet for resistance to *Rhizoctonia* root and crown rot. *Plant Breeding* 123: 158-166.

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- Carling DE, Summer DR. 1992. *Rhizoctonia*. In: Methods for research on soilborne phytopathogenic fungi. *The American Phytopathology Society Press*: 157-165.
- Cattelan AJ, Hartel PG, Fuhrmann JJ. 1999. Screening for plant growth-promoting rhizobacteria to promote early soybean growth. *J Soil Sci* 63: 1670-1680.
- Chabot R, Antoun H, Kloepper JW, Beauchamp CJ. 1996. Root colonization of maize and lettuce by bioluminescent *Rhizobium leguminosarum* biovar phaseoli. *Appl Environ Microbiol* 62: 2767-2772.
- Chang J, Ren X, Kim IS. 2009. Biogeochemical Cyclic Activity of Bacteria ars Genotype from Arsenic-contamination Abandoned Mine to Kwangyang Coastal Bay Areas. Department of Environmental Science and Engineering, Gwangju Institute of Science and Technology, 1 Oryong-dong, Buk-gu, 261 Cheomdon-gwagira, Gwangju 500-712, Republic of Korea
- Chin-A-Woeng TFC, Bloemberg GV, Lugtenberg BJJ. 2003. Phenazine and their role in biocontrol by pseudomonas bacteria. *New Phytologist* 157: 503-523.
- Chin-A-Woeng TFC, Bloemberg GV, Mulders IHM, Dekkers LC, Lugtenberg BJJ. 2000. Root colonization by phenazine-1-carboxamide-producing bacterium *Pseudomonas chlororaphis* PCL1391 is essential for biocontrol of tomato foot and root rot. *Mol Plant Microbe Interact* 13: 1340-1345.
- Clarridge JE. 2004. Impact of 16S rRNA gene sequence analysis for identification of bacterial on clinical microbiology and infection disease. *Clin Microbiol Rev* 17: 840-862.
- Compant S, Duffy B, Nowak J, Clément C, Barka EA. 2005. Use of plant growth-promoting bacteria for biocontrol of plant disease: principle, mechanisms of action, and future prospect. *Appl Environ Microbiol* 71: 4951-4959.
- Cook RJ, Baker KF. 1996. The nature and practice of biological control of plant pathogens. Minnesota, USA: *APS (The American Phytopathology Society) Press*.
- Cook RJ, Bruckart WI, Coulson JR, Goettel MS, Humber RA, Lumsden RD, Maddox JV, McManus ML, Moore L, Meyer SF, Quimbly PC, Stack JP, Vaughan JL. (1996) Safety of microorganisms intended for pest and disease control: A framework for scientific evaluation. *Biocontrol* 7: 333-351.
- Cousin S. 2008. Spatial distribution of the bacterial community in a recent tufa core sample formation Molecular Systematics, DSMZ, Inhoffenstrasse 7b, Braunschweig 38124, Germany.

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- de Souza JT, Amould C, Deulvot C, Lemanceau, Gianinazzi-Perason V, Raaijmakers JM. 2003. Effect of 2,4-diacetylphloroglucinol on *Pythium*: Cellular responses and variation in sensitivity among propagules and species. *Phytopathology* 93: 966-975.
- de Souza JT, Raaijmakers JM. 2003. Polymorphisms within the *prnD* and *pltC* genes from pyrrolnitrin and pyoluteorin - producing *Pseudomonas* and *Burkholderia* spp. *FEMS Microbiol Ecol* 43: 21-34.
- De Waeert S, Vermieren H, Mulders IHM, Kuiper I, Hendrickx N, Bloemberg GV, Vanderleyden J, de Mot R, Lugtenberg BJJ. 2002. Flagella-driven chemotactic toward exudate components is an important trait for tomato root colonization by *Pseudomonas fluorescens*. *Mol Plant Microb Interact* 15: 1173-1180.
- Delany SM, Mavrodi DV, Bonsall RF, Thomashow LS. 2001. *phzO*, a gene for biosynthesis of 2-hydroxylated phenazine compounds in *Pseudomonas aureofaciens* 30-84. *J Bacteriol* 183: 318-327.
- Dickinson M. 2003. *Molecular Plant Pathology*. London: Bios Scientific Publishers. pp 48-50
- Dikin A, Sijam K, Kadir J, Seman IA. 2006. Antagonistic bacteria against *Schizophyllum commune* FR. in Peninsular Malaysia. *Biotropia* 13:111-121.
- Drancourt M, Bollet C, Carlouz A, Martelin R, Gayral JP, Raoult D. 2000. 16S ribosomal DNA sequence analysis of a large collection of environmental and clinical unidentifiable bacterial isolates. *J Clin Microbiol* 38: 3623-3630.
- Dunbar J, Takala S, Barns SM, Davis JA, Kuske CR. 1999. Levels of bacterial community diversity in four arid soils compared by cultivation and 16S rRNA gene cloning. *Appl Environ Microbiol* 65: 1662-1669.  
e-book <http://www.litbang.deptan.go.id/berita/one/677/file/Bagian-4.pdf>. pp 36-53.
- Elliott ML. 2005. Survival, growth and pathogenicity of *Gaeumannomyces graminis* var. *graminis* with different methods of long-term storage. *Mycologia* 97: 901-907.
- Embry R. 2008. *Cultivo da soja no Cerrado de Roraima. Sistema de Produção*. Boa Vista.
- Fox G, Scumbato G, Killebrew J, Fulton H. 2009. Soybean seedling disease. Information Sheet 1167. Extension Service of Mississippi State University.

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- Gamalero E, Lingua G, Berta G, Lemanceau P. 2003. Methods for studying root colonization by introduced beneficial bacteria. *Agronomie* 23: 407-418.
- Garbeva P, Voesenek K, Van Elsas JD. 2004. Quantitative detection and diversity of the pyrrolnitrin biosynthetic locus in soil under different treatments. *Soil Biol Biochem* 36:1453-1463.
- Glandorf DCM, Brand I, Bakker PAHM. 1992. Stability of rifampicin resistance as a marker for root colonization studies of *Pseudomonas putida* in field. *Plant Soil* 147: 135-142.
- Maas D, Défago G. 2005. Biological control of soil-borne pathogens by fluorescent pseudomonads. *Nat Rev Microbiol* 3: 307-319
- Maas D, Keel C. 2003. Regulation of antibiotic production in root-colonizing *Pseudomonas* spp., relevance for biological control of plant disease. *Annu Rev Phytopathol* 41: 117-153.
- Wall L, Doerr KA, Wohlfiel LS, Roberts GD. 2003. Evaluation of the MicroSeq system for identification of mycobacteria by 16S ribosomal DNA sequencing and its integration into a routine clinical mycobacteriology laboratory. *J Clin Microbiol* 41: 1447-1453.
- Wall TA. 1999. BioEdit: a user-friendly biological sequence alignment editor and analysis program for Windows 95/98/NT. *Nucl Acids Symp Ser* 41: 95-98.
- Wall V, O'Neill GL, Magee JT, Duerden BI. 1999. Development of amplified 16S ribosomal DNA restriction analysis for identification of *Actinomyces* species and comparison with pyrolysis-mass spectrometry and conventional biochemist test. *J Clin Microbiol* 37: 2255-2257.
- Hammer PE, Hill DS, Lam ST, Van Pée KH, Ligon JM. 1997. Four gene from *Pseudomonas fluorescens* that encode the biosynthesis of pyrrolnitrin. *Appl Environ Microbiol* 63: 2147-2154.
- Hasset DJ, Schweizer HP, Ohman DE. 1995. *Pseudomonas aeruginosa* *sodA* and *sodB* mutants defective in manganese- and iron-cofactored superoxide dismutase activity demonstrate the importance of the iron-cofactored form in aerobic metabolism. *J Bacteriol* 177: 6330-6337.
- Heyndrickx M, Vauterin L, Vandamme P, Kersters K, De Vos P. 1996. Applicability of combined amplified ribosomal DNA restriction analysis (ARDRA) patterns in bacterial phylogeny and taxonomy. *J Microbiol Methods* 26: 247-259.
- Hill DS, Stein JI, Torkewitz NR, Morse AM, Howell CR, Pachlatko JP, Becker JO, Ligon JM. 1994. Cloning of genes involved in the synthesis of pyrrolnitrin from *Pseudomonas fluorescens* and role of pyrrolnitrin

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synthesis in biological control of plant disease. *Appl Environ Microbiol* 60: 78-85.

Holt JG, Krieg NR, Sheath HA, Staley JT, Williams ST. 1994. *Bergey's Manual of Determinative Bacteriology* 9<sup>th</sup> edition. Maryland: Williams and Wilkins, pp 71-174.

Hossain AKM, Alexander M. 1984. Enhancing soybean rhizosphere colonization by *Rhizobium japonicum*. *Appl Environ Microbiol* 48: 468-472.

Howe CR, Stipanovic RD. 1980. Suppression of *Pythium ultimum*-induced damping-off cotton seedlings by *Pseudomonas fluorescens* and its antibiotic, pyoluteorin. *Phytopathology* 70: 712-715.

Huang Z, Bonsall RF, Mavrodi DV, Weller DW, Thomashow L.S. 2004. Transformation of *Pseudomonas fluorescens* with genes for biosynthesis of phenazine-1-carboxylic acid improves biocontrol of rhizoctonia root rot and in situ antibiotic production. *FEMS Microbiol Ecol* 49:243-251.

Janowicz J. 2004. Culture independence characterization of soil bacteriophage in agroecosystems. CASNR. Honors research and creative achievement project. University of Tennessee, Knoxville.

Jayaswal RK, Fernandez M, Upadhyay RS, Visintin L, Kurz M, Webb J, Rinehart K. 1993. Antagonism of *Pseudomonas cepacia* against phytopathogenic fungi. *Curr Microbiol* 26: 17-22.

Ji X, Lu G, Gai Y, Gao H, Lu B, Kong L, Mu Z. 2010. Colonization of *Morus alba* L. by the plant-growth-promoting and antagonist bacterium *Burkholderia cepacia* strain Lu10-1. *BioMedCentral Microbiol* 10: 243-255.

Keel C, Schnider U, Maurhofer M, Voisard C, Laville J, Burger U, Wirthner P, Haas D, Défago G. 1992. Suppression of root disease by *Pseudomonas fluorescens* CHA0: Importance of the bacterial secondary metabolite 2,4-diacetylphloroglucinol. *Mol Plant Microbe Interact* 5: 4-13.

Keel C, Ucurum Z, Michaux P, Adrian M, Haas D. 2002. Deleterious impact of a virulent bacteriophage on survival and biocontrol activity of *Pseudomonas fluorescens* strain CHA0 in natural soils. *Mol Plant Microbe Interact* 15: 567-576.

Keel C, Weller DM, Natsch A, Défago G, Cook RJ, Thomashow LS. 1996. Conservation of the 2,4-diacetylphloroglucinol biosynthesis locus among fluorescent *Pseudomonas* strain from diverse geographic location. *Appl Environ Microbiol* 62: 552-563.

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- Kerry BR, Bourne JM. 1996. The important of rhizosphere interaction in the biological control of plant-parasitic nematodes-case study using *Verticillium chlamydosporium*. *Pestic Sci* 47: 69-75.
- Kimura K, Dudley J, Nei M, Kumar S. 2007. MEGA 4: Molecular Evolutionary Genetics Analysis (MEGA) Software version 4.0. *Molecular Biology and Evolution* 10.1093/molbev/msm092.
- King EO, Ward MK, Raney DE. 1954. Two simple media for the demonstration of pyocyanin and fluorescin. *J Lab Clin Med* 44: 301-307.
- Kirner S, Hammer PE, Hill DS, Altmann A, Fischer I, Weislo LJ, Lanahan M, van Pée KH, Ligon JM. 1998. Function encoded by pyrrolnitrin biosynthetic genes from *Pseudomonas fluorescens*. *J Bacteriol* 180: 1939-1943.
- Kloepper JW, Zablutowicz RM, Tipping EM, Lifshitz R. 1991. Plant growth promoting mediated by bacterial rhizospher colonizers. In Keister DL and Cregan PB (Eds). *The rhizospher and plant growth*. Dordrecht, Kluwer Academic Pub. pp 315-326.
- Lagace L, Pitre M, Jacques M, Roy D. 2004. Identification of the bacterial community of maple sap by using amplified ribosomal DNA (rDNA) restriction analysis and rDNA sequencing. *Appl Environ Microbiol* 70: 2056-2060.
- Lim HS, Kim YS, Kim SD. 1991. *Pseudomonas stutzeri* YPL-1 Genetic Transformation and Antifungal Mechanism against *Fusarium solani*, an Agent of Plant Root Rot. *Appl Environ Microbiol* 57: 510-516.
- Loper JE, Henkels MD. 1999. Utilization of heterologous siderophores enhances levels of iron available to *Pseudomonas putida* in the rhizosphere. *Appl Environ Microbiol* 65: 5357-5363.
- Loper JE, Lindow SE. 1994. A biological sensor for iron available to bacteria in their habitats on plant surfaces. *Appl Environ Microbiol* 60: 1934-1941.
- Mahaffee WF, Bauske EM, van Vuurde JW, van der Wolf JM, van den Brink M, Kloepper JW. 1997. Comparative analysis of antibiotic resistance, immunofluorescent colony staining, and a transgenic marker (bioluminescence) for monitoring the environmental fate of a rhizobacterium. *Appl Environ Microbiol* 63: 1617-1622.
- Marchesi JR, Sato T, Weightman AJ, Martin TA, Fry JC, Hiom SJ, Wade WG. 1998. Design and evaluation of useful bacterium-specific PCR primers that amplify genes coding for bacterial 16S rRNA. *Appl Environ Microbiol* 64: 795-799.



- Massana R, Murray AE, Preston CM, Delong EF. 1997. Vertical distribution and phylogenetic characterization of marine planktonic Archaea in the Santa Barbara channel. *Appl Environ Microbiol* 63: 50-56.
- Mavrodieva DV, Ksenzenko VN, Bonsall RF, Cook RJ, Boronin AB, Thomashow LS. 1998. A seven-gene locus for synthesis of phenazine-1-carboxylic acid by *Pseudomonas fluorescens* 2-79. *J Bacteriol* 180: 2541-2548.
- Mavrodieva DV, McSpadden-Gardener BB, Mavrodieva DM, Bonsall RF, Weller DM, Thomashow LS. 2001. Genetic diversity of *phlD* from 2,4-diacetylphloroglucinol-producing fluorescent *Pseudomonas* spp. *Phytopathology* 91: 35-43.
- Mazzella M, Cook RJ, Thomashow LS, Weller DM, Pierson III LS. 1992. Contribution of phenazine antibiotic biosynthesis to the ecological competence of fluorescent pseudomonads in soil habitats. *Appl Environ Microbiol* 58: 2616-2624.
- Mendes R, Pizzirani-Kleiner AA, Araujo WL, Raaijmakers JM. 2007. Diversity of cultivated endophytic bacteria from sugarcane: genetic and biochemical characterization of Burkholderia cepacia complex isolates. *Appl Environ Microbiol* 73: 7259-7267.
- Moye CL, Dobbs FC, Karl DM. 1994. Estimation of diversity and community structure through restriction fragment length polymorphism distribution analysis of bacterial 16S rRNA genes from a microbial mat at an active, hydrothermal vent system, Loihi Seamount, Hawaii. *Appl Environ Microbiol* 60: 871-879.
- Mueller DS, Derksen RC, Ozkan E. 2002. Efficacy of fungicides on *Sclerotinia sclerotiorum* and their potential for control of *Sclerotinia* stem rot on soybean. *Plant Disease* 86: 26-31.
- Nelson LM. 2004. Plant growth promoting rhizobacteria (PGPR): Prospects for new inoculants. Plant Management Network. Online. Crop Management doi:10.1094/CM-2004-0310-05-RV.
- Nowell Thompson B, Chaney N, Wing JS, Gould JS, Loper JE. 1999. Characterization of the pyoluteorin biosynthetic gene cluster of *Pseudomonas fluorescens* Pf-5. *J Bacteriol* 181: 2166-2174.
- O'Sullivan D, O'Gara F. 1992. Traits of fluorescent *Pseudomonas* spp. involved in suppression of plant root pathogens. *Microbiol Rev* 56: 662-676.
- Orderich A, Elad Y, Chet I. 1988. The Role of Chitinase of *Serratia marcescens* in biocontrol of *Sclerotium rolfii*. *Phytopathology* 78: 84-88.

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- Parbery D.G. 1996. Trophism and the ecology of fungi associated with the plants. *Biol Rev* 71: 473-527.
- Paulsen IT *et al.* 2005. Complete genome sequence of the plant commensal *Pseudomonas fluorescens* Pf-5. *Nature Biotechnol* 23: 873-878.
- Persello-Cartieaux F, Nussaume L, Robaglia C. 2003. Tales from underground: Molecular plant-rhizobacteria interactions. *Plant Cell Environ* 26:189-199.
- Person III LS, Gaffney T, Lam S, Gong F. 1995. Molecular analysis of genes encoding phenazine biosynthesis in the biocontrol bacterium *Pseudomonas aureofaciens* 30-84. *FEMS Microbiol Lett* 134: 299-307.
- Press CM, Loper JE, Kloepper JW. 2001. Role of iron in rhizobacteria-mediated induced systemic resistance of cucumber. *Phytopathology* 91: 593-598.
- Price-Whelan A, Dietrich LEP, Newman DK. 2006. Rethinking 'secondary' metabolism: physiological roles for phenazine antibiotics. *Nature Chem Biol* 2: 71-78
- Slitbang Tanaman Pangan. 2009. Hama, penyakit dan masalah hara pada tanaman kedelai: identifikasi dan pengendaliannya. e-book <http://www.litbang.deptan.go.id/berita/one/677/file/Bagian-4.pdf>. pp 36-53.
- Su JG. 2007. Isolation and characteristics of a fluoroglycofen-ethyl-degrading bacterium. College of Life Science, Nanjing Agricultural University, Tongwei Road 6, Nanjing, Jiangsu 210095, China
- Raaijmakers JM, Weller DM, Thomashow L. 1997. Frequency of antibiotic-producing *Pseudomonas spp* in natural environments. *Appl Environ Microbiol* 63: 881-887.
- Raaijmakers JM, Weller DM. 2001. Exploiting genotypic of 2,4-diacetylphloroglucinol-producing *Pseudomonas spp.*: characterization of superior root-colonizing *P. fluorescens* strain Q8r1-96. *Appl Environ Microbiol* 67: 2545-2554.
- Raaijmakers JM, Vlami M, de Souza JT. 2002. Antibiotic production by bacterial biocontrol agents. *Antonie van Leeuwenhoek* 81: 537-547.
- Rajendran S, Rameshkumar N, Gunasekaran P. 2005. Genetic Diversity of *Pseudomonas sp.* from rice field. *Microbial Technology*, Madurai Kamaraj University, Palkalai Nagar, Madurai, TN 625021, India
- Ramamoorthy V, Vismanathan R, Raguchander T, Prakasam V, Samiyappan R. 2001. Induction of systematic resistance by plant growth promoting rhizobacteria in crop plants against pests and disease. *Crop Protect* 20: 1-11.



- Ramette A, Moenne-Loccoz Y, Defago G. 2003. Prevalence of florescent Pseudomonads producing antifungal phloroglucinol and/or hydrogen cyanide in soils naturally suppressive or conducive to tobacco root rot. *FEMS Microbiol Ecol* 44: 35-43.
- Ross IL, Alami Y, Harvey PR, Achouk W, Ryder MH. 2000. Genetic diversity and biological control activity of novel species of closely related Pseudomonads isolated from wheat field soils in South Australia. *Appl Environ Microbiol* 66: 1609-1616.
- Saad M. 2006. Destruction of *Rhizoctonia solani* and *Phytophthora capsici* causing tomato root-rot by *Pseudomonas fluorescens* lytic enzymes. *Res J Agric Biol Sci* 2: 274-281.
- Sambrook J, Russell DW. Molecular cloning. A laboratory manual. 3<sup>th</sup> edition. New York, Cold Spring Harbor Laboratory Press, 2001, pp 6.62.
- Scherer FM, Kloepper JW, Singleton CA. 1985. Chemotaxis of fluorescent *Pseudomonas* spp. to soybean seed exudates *in vitro* and in soil. *Canadian J Microb* 31: 570-574.
- Scheurell SJ, Sullivan DM, Mahaffee WF. 2005. Suppression of seedling damping-off caused by *Pythium ultimum*, *P irregulare*, and *Rhizoctonia solani* in container media amended with a diverse range of Pasific Northwest compost sources. *Phytopathology* 95: 306-315.
- Schroeder MN, Hancock JG. 1982. Disease-suppressive soil and root-colonization bacteria. *Science* 216: 1376-1381.
- Shen Y, Yan DZ, Chi XQ, Yang YY, Leak DJ, Zhou NY. 2008. Degradation of cyclohexylamine by a new isolate of *Pseudomonas plecoglossicida*. *World J Microbiol Biotechnol* 24: 1623-1625.
- Shishido M, Miwa C, Usami T, Amemiya Y, Johnson KB. 2005. Biological control efficiency of Fusarium wilt of tomato by nonpathogenic *Fusarium oxysporum* Fo-B2 in different environments. *Phytopathology* 95: 1072-1080.
- Steindler L, Bertani I, De Sordi L, Bigirimana J, Venturi V. 2008 The presence, type and role of N-acyl homoserine lactone quorum sensing in fluorescent *Pseudomonas* originally isolated from rice rhizospheres are unpredictable. *FEMS Microbiol Lett* 288: 102-111.
- Suliyanto P. 2004. Sustainable management of soil-borne plant diseases. National Center for Appropriate Technology. Publication #IP173

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- Tamura K, Dudley J, Nei M, Kumar S. 2007. MEGA4: Molecular Evolutionary Genetics Analysis (MEGA) software version 4.0. *Molecular Biology and Evolution* 10.1093/molbev/msm092.
- van de Peer Y, De Wachter R. 1997. TREECON for Windows: a software package for the construction and drawing of evolutionary tree for the Microsoft Windows environment. *Comput Appl Biosci* 10: 569-570.
- van Loon LC, Bakker PAHM, van der Heijdt WHW, Wendehenne D, Pugin A. 2008. Early responses of tobacco suspension cells to rhizobacterial elicitors of induced systemic resistance. *Mol Plant Microbe Interact* 21: 1609-1621.
- van de Broek A, Vanderleyden J. 1995. The Role of bacterial motility, chemotaxis, and attachment in bacteria-plant interaction. *Mol Plant Microbe Interact* 8: 800-810.
- van de Vosse CR, van de Weert M, Dijkshoorn L, Tjernberg I, Elaichouni A, De Vos P, Claeys G, Verschraegen G. 1995. Identification of *Acinetobacter* genomic species by amplified ribosomal DNA restriction analysis. *J Clin Microbiol* 33: 11-15.
- van de Vosse CR, Rossau R, De Vos P, Gillis M, Janssens D, Paeppe N, De Rouck A, Fiers T, Claeys G, Kersters K. 1992. Rapid identification of bacteria of the Comamonadaceae with amplified ribosomal DNA restriction analysis (ARDRA). *FEMS Microbiol Lett* 93: 227-234.
- van de Vosse CR, Arnold W, Puhler A. 1996. Diversity of uncultured microorganisms associated with seagrass *Halophilla stipulacea* estimated by restriction fragment length polymorphism analysis of PCR-amplified 16S rRNA genes. *Appl Environ Microbiol* 62: 766-771.
- van de Vosse CR, Glandorf DCM, Ouwens TWM, Smit E, Leeflang P, Wernars K, Thomashow L, van Loon LC, Bakker PAHM. 2003. Repeated introduction of genetically modified *Pseudomonas putida* WCS358r without intensified effects on the indigenous microflora on field-grown wheat. *Appl Environ Microbiol* 69: 3110-3118.
- Widyono S. 2003. Optimisation of biological control of damping-off of sugar beet (*Beta vulgaris* L. ssp. *vulgaris* var. *altissima* Doell) caused by *Phytophthora ultimum* Trow by using *Pseudomonas fluorescens* B5. [PhD Dissertation] Göttingen: Faculty of Agriculture. Georg-August University Göttingen.
- van de Vosse CR. 2006. How we do, don't and should look at bacteria and bacteriology. In *Prokaryotes* (3<sup>th</sup>) Volume 1. Martin Dworkin (editor-in-chief). Science and Business Media Inc. Singapore, Springer, pp. 1-23.
- van de Vosse CR. 1987. Bacterial evolution. *Microbiol Rev* 51 : 221-271.

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- Wrather JA, Anderson TR, Arsyad DM, Tan Y, Ploper LD, Porta-Puglia A, Ram HH, Yorinori JT, 2001. Soybean disease loss estimates for the top ten soybean-producing countries in 1998. *Can J Plant Pathol* 23: 115-121.
- Xiang S, Yao T, An L, Xu B, Wang J. 2005. 16S rRNA sequences and differences in bacteria isolated from the Muztag Ata Glacier at increasing depths. *Appl Environ Microbiol* 71: 4619-4627.
- Zhou J, Davey ME, Figueras JB, Rivkina E, Gilichinsky D, Tiedje JM. 1997. Phylogenetic diversity of bacterial community from Siberian tundra soil DNA. *Microbiology* 143: 3913-3919.
- Zilli J, Ribeiro KG, Campo RJ, Hungria M. 2009. Influence of fungicide seed treatment on soybean nodulation and grain yield. *Rev Bras Ciênc Solo*. 33: 917-923.

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