Dr. CHUNXIA WANG

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SUMMARY OF QUALIFICATIONS

Ph.D. in Microbiology with a wide range of experience in: Microbiology, Molecular Biology, Microbe-Plant Interactions, Molecular Ecology, Metagenomics, and Bioinformatics. Proven ability to work on own initiative and as part of a team. Excellent communication and interpersonal skills. Demonstrated leadership skills in directing, managing, developing and motivating a group to achieve their objectives. Highly organized and efficient hard-worker; enjoys the challenges of solving problems and implementing new ideas. Dedicated to research and teaching. Highlights of my qualifications:

- More than 10 years experience as a researcher in USA, Canada, Switzerland and China.
- Proven ability to work on:
  Metagenomics- DNA library Construction and Novel Genes/Products Discovery
  Microbe-Plant Interactions
  Basic & Molecular Biological Study of Plant, Soil, and Environmental Microbes
  Proteomics
  Bacterial Genetics
  Biological Control of Plant Disease
  DNA Microarray
  Plant Pathology
  Bioinformatics & Teaching
- Successfully managed two research laboratories.
- Strong computer skills, data analysis, and significant scientific publication record.

EDUCATION & TRAINING:

2003-Present	Senior Research Associate and Lab Manager in Dr. B. Sobral's lab, Virginia Bioinformatics Institute (VBI), Virginia Tech., USA
2001-2003	Postdoctoral/RA in Dr. T. Charles's lab, Univ. of Waterloo, Canada
2000-2001	Postdoctoral Fellow in Dr. P. Paul's lab, Univ. of Guelph, Canada
1998-2000	Postdoctoral Fellow in Dr. G. Defago's lab, ETH, Switzerland
1997	Ph.D. in Microbiology (overall average: 90/100) Huazhong Agri. Univ., China

RESEARCH EXPERIENCE:

2003 – Present: ***Senior Research Associate/Lab Manager***, VBI, Virginia Tech. USA
Director: Dr. Bruno Sobral
Work includes: 1) proteomics and microarray analysis of the symbiotic interaction of *Sinorhizobium moliloti- Medicago truncatula*; 2) functional genomic studies with a few key genes involved in carbon metabolite, nodulation and nitrogen fixation; 3) bioinformatics.

2004 – Present: ***Adjunct Professor***, Dept. of Horticulture, Virginia Tech. USA
Research interests: Metagenomic strategy to understand plant-microbial molecular interaction and soil microbial ecology.

2001- 2003: ***Postdoctoral/Research Associate,*** Dept. of Biology, University of Waterloo, Canada
Advisor: Dr. Trevor Charles

Metagenomic strategy: discovery of novel genes and useful products from soil and other environment (from culturable and unculturable microorganisms).

2000 – 2001: *Postdoctoral Fellow*, Dept. of Plant Agriculture, University of Guelph, Canada
Advisor: Dr. Peter Paul
Genetic engineering of tomato, and the role of ethylene in plant disease resistance.

1998 – 2000: *Postdoctoral Fellow*, Institute of Plant Sciences, Swiss Federal Institute of Technology (ETH), Switzerland.
Advisor: Dr. Genevieve Defago
Phenotypic and molecular genetic study of biological control bacteria.

1992 – 1997: *Graduate Student,* National Key Laboratory of Agricultural Microbiology/Dept. of Plant Protection, Huazhong Agricultural University, China
Advisor: Profs Qi Zhou and Daoben Wang
Thesis: Isolation, Selection, Identification, Mechanisms and Molecular Ecology of the Plant Growth-Promoting Rhizobacteria (PGPR).

1986 – 1992: *Research Associate*, Institute of Plant Protection, Henan Academy of Agricultural Sciences, China
Integrated management of soil-borne plant diseases through biological control and genetics engineering of plants.

TEACHING EXPERIENCE:

1997: Lecturer, Integrated Pest Management and Sustainable Agriculture, Henan Academy of Agricultural Sciences, Henan, China

1997: Lecturer, Chemical and Biological Pesticide- Safety and Use, Henan Academy of Agricultural Sciences, Henan, China

1996: Teaching Assistant, Molecular Ecology of Plant-Microbe Interactions. National Key Laboratory of Agricultural Microbiology, Huazhong Agricultural University, Wuhan, China

1994: Teaching Assistant, Plant Molecular Pathology. Dept. of Plant Protection, Huazhong Agricultural University, Wuhan, China

SUPERVISORY EXPERIENCE:

Supervise more then 20 lab juniors (postdoc., graduate students, lab technician, under-graduate students) in USA, Canada, Switzerland and China

GRANTS:

Held-

1. PI (2007). Use of protomics for identification and analysis of the ExoS/ChvI two component regulate system in *Sinorhizobium meliloti*. The project was funded by VBI, Virginia Tech. $ 22,500
2. Co-PI with Dr. Peter Paul and Dr. Ting Zhou (2001). Using transgenic plants to understand the role of ethylene in plant disease resistance and susceptibility. The project was funded by Agriculture and Agri-Food Canada. $ 20,000
3. PI (1998). Isolation of plant biological control agents and their application in Henan. The project was funded by Henan Provincial Science Foundation of P.R. China. 400,000 RMB

AWARDS and HONORS:

Awards:

2007: Travel Award for the 20th North American Symbiotic Nitrogen Fixation Conference
2007: Recognition of Outstanding Contribution by the Board of Visitors and Virginia Bioinformatics Institute of Virginia Tech
2006: Recognition of Outstanding Contribution by the Board of Visitors and Virginia Bioinformatics Institute of Virginia Tech
2005: Recognition of Outstanding Contribution by the Board of Visitors and Virginia Bioinformatics Institute of Virginia Tech
2004: Recognition of Outstanding Contribution by the Board of Visitors and Virginia Bioinformatics Institute of Virginia Tech
1998: Second place, Outstanding Paper Award by the Henan Province Government for the paper "Biological control of plant diseases and insects, and sustainable development in agriculture"
1998: Third place, Outstanding Paper Award by the Henan Province Government for the paper "The challenges of new agricultural revolutions of science and technology"
1997: First place, Henan Provincial Science and Technology Progress Award (only one in whole province) for the project "Selection, identification of cotton diseases-resistant varieties in different mature period and their application".
1997: Second place, Henan Academy of Agri. Sci. Award for the project "Study on selection, identification, and application of cotton disease resistant varieties in different conditions".
1994: Third place, Henan Provincial Sci. and Technology Progress Award for the project "The best arrangement of cotton- wheat varieties and other related techniques".
1994: Second place, Henan Academy of Agri. Sci. Award for the project "Research and development of the best cotton and wheat varieties".
1991: Second place, Henan Provincial Science and Technology Progress Award for the project "Technology and application of high quality and high yields of cotton varieties".
1991: Second place, Henan Academy of Agri. Sci. Award for the project "Selection, evaluation, and application of cotton diseases resistant varieties in Henan Province".
1988: Third place, Henan Academy of Agri. Sci. Award for the project "Study on cotton boll diseases in Henan Province".

Honors:

1994: Excellent graduate student (during Master program) at Huazhong Agri. Univ. Entrance examination waived (one out of 30 students) for privileged admission to PhD program.
1986: Excellent undergraduate student at Henan Agri. Univ., including privilege to choose a job (one out of 120 students)

PROFESSIONAL MEMBERSHIP:

1. American Society of Microbiology
2. International Society for Molecular Plant-Microbe Interactions

MANUSCRIPT REVIEWER FOR INTERNATIONAL PEER-REVIEWED JOURNALS:

1. Molecular Plant-Microbe Interactions
2. Proteomics
3. Microbial Ecology
4. Canadian Journal of Microbiology
5. Plant Physiology and Biochemistry

LIST OF PUBLICATIONS:

a) Representative Publications in Peer-reviewed Journals:

1. Wang, C., Sheng, X., Equi, R.C., Trainer, M.A., Charles, T.C., and Sobral, B.W.S. 2007. Influence of the Poly-3-Hydroxybutyrate (PHB) granule-associated proteins (PhaP1 and PhaP2) on PHB accumulation and symbiotic nitrogen fixation in *Sinorhizobium meliloti* Rm1021. Journal of Bacteriology 189 (24): 9050-9056
2. Wang, C., Sobral, B.W.S., and Williams, K.P. 2007. Loss in a bacterial group of a universal tRNA feature. Journal of Bacteriology 189 (5): 1954-1962
3. Wang, C., Saldanha, M., Sheng, X., Shelswell, K., Walsh, K.T., Sobral, B.W.S., and Charles, T.C. 2007. Roles of poly-3-hydroxybutyrate (PHB) and glycogen in symbiosis of *Sinorhizobium meliloti* with *Medicago sp*. Microbiology 153: 388-398
4. Wang, C., Meek, D.J., Panchal, P., Boruvka, N., Archibald, F.S., Driscoll, B. T., Charles, T.C. 2006. Isolation of poly-3-hydroxybutyrate metabolism genes from complex microbial communities by phenotypic complementation of bacterial mutants. Applied and Environmental Microbiology 72: 384-391
5. Mao, C. H., Qiu, J., Wang, C., Charles, T.C., and Sobral, B.W.S. 2005. NodMutDB: a database for genes and mutants involved in symbiosis. Bioinformatics 21 (12): 2927-2929
6. Wang, C., Wang, D.B., and Zhou, Q. 2004. Colonization and persistence of the biocontrol plant growth-promoting rhizobacteria (PGPR) *Pseudomonas fluorescens* strain CS85 on cotton seedling roots. Canadian Journal of Microbiology 50: 475-481
7. Wang, C., Ramette, A., Punja, P., Zala, M., Natsch, A., Moënne-Loccoz, Y., and Défago, G. 2001. Cosmopolitan distribution of *phlD*-containing dicotyledonous crop associated biological control pseudomonads of worldwide origin. FEMS Microbiology Ecology 37: 105-116
8. Wang, C., Knill, E., Glick, B.R., and Défago, G. 2000. Effect of transferring 1-aminocyclopropane-1-carboxylic acid (ACC) deaminase genes into *Pseudomonas fluorescens* strain CHA0 and its *gacA* derivative CHA96 on their growth-promoting and disease-suppressive capacities. Canadian Journal of Microbiology 46: 898-907
9. Chen, S.Y., Zhang, Y.X., and Wang, C. 2000. Identification of bacteria antagonistic to *Stagonospora curtisii* on *Narcissus sp*. Journal of Biological Control 16 (2): 84-86
10. Wang, C., Wang, D.B., and Zhou, Q. 1998. Isolation, selection, identification, mechanisms and molecular ecology of the PGPR (Plant-Growth-Promoting-Rhizobacteria) strains in cotton. Phytopathology 28 (2): 190-191
11. Wang, C., Wang, Z.Y., Luo, J.L. 1998. Biological control of plant diseases and insects, and sustainable development in agriculture. Acta Agriculture Boreali-Sinica 13: 158-160
12. Wang, C., Luo, J.L. Wang, H.Z. 1998. The new agricultural revolutions of science and technology in China. Acta Agriculture Boreali-Sinica 13: 128-133
13. Wang, Z.Y., and Wang, C. 1998. Studies of histopathology on the resistance of several ground crops to Pseudoperono-spora Gubensis. Journal of Henan Agricultural Science 5: 24-27
14. Wang, C., Wang, D.B., and Zhou, Q. 1997. Classification and identification of the plant growth-promoting rhizobacteria (PGPR) in cotton. Journal of Huazhong Agricultural University 16:29-32
15. Wang, C., Wang, D.B., and Zhou, Q. 1996. Isolation and selection of the plant growth-promoting rhizobacteria (PGPR) in cotton. Journal of Huazhong Agricultural University 15:233-236

16. Wang, C., Wang, D.B., and Zhou, Q. 1996. *GusA* as marker gene to monitor introduced biocontrol agent of plant rhizosphere. Journal of Huazhong Agricultural University 22:134-136
17. Wang, C., Luo, J.L, and Chen, Y.S. 1994. Effects of seed treatment with "mai-mian-ning" to suppress rhizoctonia root rot in cotton. Journal of Henan Agricultural Science 5:16-18
18. Liu, Y.H., Liu, S.M., Wang, G.J., Fu, R.H., Gong, G., Zhou, Y.L., Luo, J.L., and Wang, C. 1994. A new variety of cotton - "Yu Mian 10". China Cotton 21 (1): 22-23
19. Wang, C. and Luo, J. L. 1991. Use of cuprine chelate induced resistance to *Fusarium oxysporum* f. sp. *vasinfectum* in cotton. Journal of Henan Agricultural Science 8: 15-17
20. Wang, C., Wu, M.S., and Luo, J.L. 1989. Research and application of yield-increasing bacteria in Henan province. Journal of Henan Agricultural Science 7: 19-21
21. Wang, C. 1988. A deserved consideration plant disease - the type of fallen leave verticillium wilt of cotton. Journal of Henan Agricultural Science 4: 15-16

b) Book Chapter:

1. Wang, C., Wang, D.B., and Zhou, Q. 2004. Induction of disease resistance in cotton seedlings against pathogens by plant growth-promoting rhizobacteria (PGPR) *Pseudomonas fluorescens* strain CS85. In: Microorganisms and Agriculture. K. Lin (eds.), pp175-179. Science Press, Beijing, China
2. Wang, C., Wang, D.B., and Zhou, Q. 2004. Mechanisms of biocontrol of cotton seedling diseases by plant growth-promoting rhizobacteria (PGPR) fluorescens pseudomonads strains CS85 and ZR. In: Microorganisms and Agriculture. K. Lin (eds.), pp166-174. Science Press, Beijing, China
3. Wang, C., Wang, D.B., and Zhou, Q. 2004. Colonization and population dynamics of cotton seedling roots by genetically modified plant growth-promoting rhizobacteria (PGPR) *Pseudomonas sp*. strains CS85 and ZR. . In: Microorganisms and Agriculture. K. Lin (eds.), pp157-165. Science Press, Beijing, China
4. Wang, C., Liu, J.L., Liu, J.Z., Niu, Z.H, Wang, D.B., and Zhou, Q. 1997. *GusA* as a marker gene to study the colonization of PGPR strains in the rhizobacteria of cotton seedling. In: Advances in Plant Pathology, pp140-142, Agricultural Science and Technology Press, Beijing, China
5. Wang, C., Wang, D.B., Zhou, Q., Luo, J.L., Ji, H.Q. 1996. Studies on the plant growth-promoting rhizobacteria (PGPR) in cotton. In: Advances in Biological Control of Plant Diseases, pp105-108, W. H. Tang, R. J. Cook, and A. Rovira (eds.), China Agricultural University Press, Beijing, China
6. Wang, C., Luo, J.L., Ji, H.Q., Chen, Y.S., Niu, Z.H., and Wang, H.Z. 1996. The initial study of the mechanism involved in *Fusarium* wilt pathogen suppressive soil. In: Research Advances of Plant Protection in China, pp250-252. China Science and Technology Press, Beijing,China

c) In Preparation:

1. Wang, C., Sheng, X., Equi. R., Mao, C. and Sobral, B.W.S. Investigation of the role of *aniA* plays in regulating reserve polymer accumulation and global genes expression in *S. meliloti* Rm1021
2. Wang, C., Kemp, J., Mao, C., Sheng, X., Equi, R.C., and Sobral, B.W.S. Transcriptomic and proteomic analysis of the exoS/chvI two-component system in *S. meliloti*

3. Schallmey, M., Wang, C., Ly, A., Meglei, G., Voget, S., Streit, W.R., Driscoll, B.T., and Charles, T.C. Novel polyhydroxyalkanaote synthase encoding genes from soil metagenome libraries (Journal of Bacteriology- manuscript under preparation)
4. Rolider, A.J., Wang, C., Glick, B.R., and Charles, T.C. Isolation and characterization of novel phosphorous metabolism genes from complex community metagenomic libraries

d) Genes & DNA sequences in GeneBank (NCBI): Total 24

1. Wang, C., Meek, D., Archibald, F.S., Driscoll, B.T. and Charles, T.C. 2004. AY692350 Uncultured soil bacterium clone RCX32 D-3-hydroxybutyrate dehydrogenase (*bdhA*) gene, complete cds gi|52000968|gb|AY692350.1|[52000968]
2. Wang, C., Meek, D., Archibald, F.S., Driscoll, B.T. and Charles, T.C. 2004. AY692351 Uncultured soil bacterium clone RCX23 D-3-hydroxybutyrate dehydrogenase (bdhA) gene, complete cds gi|52000970|gb|AY692351.1|[52000970]
3. Wang, C., Meek, D., Archibald, F.S., Driscoll, B.T. and Charles, T.C. 2004. AY692352 Uncultured bacterium clone RCX6 D-3-hydroxybutyrate dehydrogenase (bdhA) gene, complete cds gi|52000972|gb|AY692352.1|[52000972]
4. Charles, T.C., Wang, C. and Driscoll, B.T. 2004. AY836590 Uncultured soil bacterium clone N1 16S ribosomal RNA gene, partial sequence gi|56609055|gb|AY836590.1|[56609055]

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24. Charles, T.C., Wang, C. and Driscoll, B.T. 2004. AY836610 Uncultured soil bacterium clone NL67 16S ribosomal RNA gene, partial sequence gi|56609075|gb|AY836610.1|[56609075]

ACADEMIC PRESENTATIONS & POSTERS:

1. Wang, C., Kemp, J., Mao, C., Sheng, X., Equi, R.C., Fonseca, I.D. and Sobral B.W. Genome-wide analyses of *Sinorhizobium meliloti* Rm1021 gene expression responsive to the ExoS/ChvI two-component regulatory system. The 108th General Meeting of the American Society for Microbiology. Boston, USA, June 1-5, 2008
2. Wang, C., Sheng, X., Equi, R.C., Charles, T.C. and Sobral, B.W. Influence of the PHB granule-associated proteins (PhaP) on PHB accumulation and symbiotic nitrogen fixation in *Sinorhizobium meliloti* Rm1021. The 107th General Meeting of the American Society for Microbiology. Toronto, Canada, May 21-25, 2007
3. Wang, C., Sheng, X., Equi, R., Charles, T.C., Sobral, B.W. PHB granule-associated proteins in *Sinorhizobium meliloti* Rm1021. The 20th North American Symbiotic Nitrogen Fixation Conference. Milwaukee, Wisconsin , USA, July 10-14, 2007
4. Wang, C., Kemp, J., Mao, C., Sheng, X., Equi, R.C. and Sobral, B.W. Genome-wide analyses of *Sinorhizobium meliloti* 1021 gene expression responsive to the ExoS/ChvI two-component regulatory system. The 2nd Annual VBI Research Symposium. Montain Lake, Virginia, USA. Sept 5-6, 2007
5. Mao, C., Driscoll, T., Dyer, M., Wang, C., Williams, K., and Sobral, B.W.. Identification of novel small RNAs in *Sinorhizobium meliloti*. The 2nd Annual VBI Research Symposium, Mountain Lake, Virginia, USA, Sept 5-6, 2007
6. Wang, C., Kemp, J., Mao, C., Sheng, X., Equi, R.C. and Sobral, B.W. Genome-wide analyses of *Sinorhizobium meliloti* 1021 gene expression responsive to the ExoS/ChvI two-component regulatory system. The 2nd Annual VBI Research Symposium. Virginia, USA. April 19-20, 2007

7. Wang, C., Sheng, X., Mao, C., Equi, R.C., Charles, T.C. and Sobral, B.W. Investigation of the early stage symbiotic interaction of *Medicago truncatula-Sinorhizobium meliloti* by proteomics. The 3rd International Conference on Legume Genetics. Brisbane, Australia. April 9-13, 2006
8. Mao, C., Qiu, J., Wang, C., Charles T.C., and Sobral, B.W. NodmutDB: A comprehensive database for genes and mutants involved in rhizobia-legume symbiosis. The 3rd International Conference on Legume Genetics. Brisbane, Australia. April 9-13, 2006
9. Rolider, A.J., Wang, C., Glick, B.R., and Charles, T.C. Isolation and characterization of novel phosphorous metabolism genes from complex community metagenomic libraries. The 56th Annual Meeting of the Canadian Society of Microbiologists, London, Ontario, Canada. June 18-21, 2006
10. Wang, C., Sheng, X., Equi, R.C., Charles, T.C., and Sobral, B.W. PHB granule-associated proteins influences PHB biosynthesis and nitrogen fixation in *Sinorhizobium meliloti* Rm1021. The 1th Annual VBI Research Symposium. Virginia, USA. March 23-24, 2006
11. Wang, C., Sheng, X., Equi, R.C., Charles, T.C. and Sobral, B.W. PHB granule-associated proteins in *Sinorhizobium meliloti*. The 105th General Meeting of the American Society for Microbiology. Atlanta, USA, June 6-9, 2005
12. Wang, C., Saldanha, M., Sheng, X., Shelswell, K., Charles, T.C., and Sobral, B.W. Further investigation of the roles of poly-3-hydroxybutyrate (PHB) and glycogen in *Sinorhizobium meliloti- Medicago sp.* symbiosis. The XIV International Congress on Nitrogen Fixation. Beijing, China. Oct. 27-Nov. 3, 2004
13. Wang, C., Sheng, X., Mao, C., Charles, T.C., and Sobral, B.W. Investigation of the early stage symbiotic interaction of *Sinorhizobium meliloti- Medicago truncatula* by functional genomics. The XIV International Congress on Nitrogen Fixation. Beijing, China. Oct. 27-Nov. 3, 2004
14. Mao, C., Qiu, J., Wang, C., Charles, T.C., and Sobral, B.W. NodmutdDB: A comprehensive database for plant and bacterial genes and mutants involved in nodulation and nitrogen fixation. The XIV International Congress on Nitrogen Fixation. Beijing, China. Oct. 27-Nov. 3, 2004
15. Wang, C., Saldanha, M., Sheng, X., Charles, T.C., and Sobral, B.W. Effect of glycogen synthase (*glgA*) and poly-3-hydroxybutyrate synthase (*phbC*) mutants of *Sinorhizobium meliloti* on nodulation of *Medicago sp*. The 19th North American Symbiotic Nitrogen Fixation Conference. Bozeman, USA. June 27- July 1, 2004
16. He, Y., Wang, C., Mao. C., Chen, Q., McMaster, N., Malhotra, S., Dickman, A., and Sobral, B.W. Genes shared for intracellular survival and symbiosis by comparative genomics of *Brucella melitensis* and *Sinorhizobium meliloti.* The 19th North American Symbiotic Nitrogen Fixation Conference. Bozeman, USA. June 27- July 1, 2004
17. Wang, C., Saldanha, M., Shelswell, K.J., Sheng, X., Charles, T.C., and Sobral, B.W. The role of poly-3-hydroxybutyrate and glycogen in symbiosis of *Sinorhizobium meliloti* with *Medicago truncatula*. The 104th General Meeting of the American Society for Microbiology. New Orleans, USA. May 23-27, 2004
18. He, Y., Wang, C., Mao. C., Chen, Q., McMaster, N., Malhotra, S., Dickman, A., and Sobral, B.W. Comparative genomic analysis of *Brucella melitensis* and *Sinorhizobium meliloti* may reveal additional orthologs shared for intracellular survival and symbiosis. The 5th European Conference on Grain Legumes with the 2nd International Conference on Legume Genomics and Genetics: Genomics in Agriculture. Dijon, France. June 7-11, 2004
19. Wang, C., Meek, D., Boruvka, N., Panchal, P., Driscoll, B.D., Archibald, F.S., and Charles, T.C. Isolation of PHB metabolism genes from DNA libraries of soil communities and pulp mill

effluent activated sludge communities by functional complementation. The 103rd General Meeting of the American Society for Microbiology. Washington D.C., USA. May 18-22, 2003

20. Wang, C., Meek, D., Driscoll, B., and Charles, T.C. Isolation of genes for D-3-hydroxybutyrate utilization from metagenomes of soil and activated sludge. The 52nd Annual Meeting of the Canadian Society of Microbiologists. Saskatoon, Canada. June 16-19, 2002
21. Wang, C., Knill1, E., Glick, B.R., and Défago, G. Transferring ACC deaminase gene improves the biocontrol capacities of *Pseudomonas fluorescens* strain CHA0. The 51st Annual Meeting of the Canadian Society of Microbiologists. Waterloo, Canada. June 10-13, 2001
22. Ramette, A., Wang, C., Punjasamarnwong, P., Zala, M., Natsch, A., Moenne-Loccoz, Y., and Defago, G. Relationship between restriction patterns of the 2,4-diacetylphloroglucinol biosynthetic gene *phlD* and carbon substrate utilisation profiles in biocontrol fluorescent pseudomonads. The 5th International PGPR (Plant Growth-Promoting Rhizobacteria) Workshop. Villa Carlos Paz Córdoba, Argentina. Oct. 29- Nov. 3, 2000
23. Wang, C., Knill, E., Glick, B. R., and Défago, G. An ACC deaminase gene improves the growth-promoting and disease-suppressive capacities of *Pseudomonas fluorescens* strain CHA0. The 5th International PGPR (Plant Growth-Promoting Rhizobacteria) Workshop. Villa Carlos Paz Córdoba, Argentina. Oct. 29- Nov. 3, 2000
24. Wang, C., Glick, B.R., and Pauls, K.P. The use of transgenic tomato plants to understand the role of ethylene in response to pathogen attack. The CSPP Eastern Region Meeting. Waterloo, Canada. Dec. 2000
25. Wang, C., Knill, E., Glick, B. R., and Défago, G. The biocontrol abilities of the strain *Pseudomonas fluorescens* CHA0 are influenced by expression of an ACC deaminase gene. The CSPP Eastern Region Meeting. Waterloo, Canada. Dec. 2000
26. Wang, C., Glick, B.R., and Pauls, K.P. Molecular and genetic study of the relation between ethylene and disease resistance in tomato. The joint CBA/CSPP National Meeting, London, Canada. June 24-28, 2000
27. Wang, C., Knill, E., Glick, B.R., and Défago, G. Engineering bacteria as biosensors for the role of plant ethylene in disease resistance. Swiss Academy of Sciences SAS Meeting. Luzern, Switzerland. Oct., 1999
28. Wang, C., Zala, M., Natsch, A., and Défago, G. Diversity and similarity of the structural gene phlD for characterizing populations of biocontrol fluorescent *Pseudomonas spp*. producing antimicrobial phloroglucinols. The 1999 International Conferences on Integrated Pest Management. Beijing, China. Oct., 22-26, 1999
29. Wang, C., Wang, D.B., and Zhou, Q. Biological control of *Verticillium dahliae*. The 7th International *Verticillium* Symposium. Athens, Greece. Oct., 6-10, 1997
30. Wang, C., Wang, D.B., and Zhou, Q. Investigation of the biocontrol mechanism and molecular ecology of *Pseudomonas fluorescens* CS85. The 3rd International Symposium on Phytopathology and Biotechnology. Hangzhou, China. May, 1997
31. Wang, C., Wang, D.B., and Zhou, Q. Studies on the plant growth-promoting rhizobacteria (PGPR) in cotton. International Workshop on Biological Control of Plant Diseases (96-IWBCPD). Beijing, China. May 22-27, 1996

REFERENCES

References can be provided upon request.