

## **Curriculum Vitae**

Ching-Hong Yang

Professor

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### **Education:**

Ph.D. in Plant Pathology, University of California, Riverside, California, 1993

M.S. in Plant Pathology, National Chung-Hsing University, Taiwan, 1984

B.S. in Plant Pathology, National Chung-Hsing University, Taiwan, 1982

### **Appointments:**

2014	Professor, Department of Biological Sciences, University of Wisconsin-Milwaukee
2007-2014	Associate Professor, Department of Biological Sciences, University of Wisconsin-Milwaukee
2003-2007	Assistant Professor, Department of Biological Sciences, University of Wisconsin-Milwaukee

### **Professional Memberships:**

Member, American Phytopathology Society

Member, American Society for Microbiology

### **Awards and Recognitions:**

Senior Editor, Phytopathology, 2012-2014.

Editor, PLoS ONE, 2008-present.

Editorial Board, Applied Environmental Microbiology, 2009-2012.

Gugan (Distinguished) Professor of 111 project, China Agricultural University, China, 2012-2016.

National Thousand People Plan elected, China, 2011

Adjunct Professor of China Agricultural University, 2009- 2014.

Adjunct Professor of Zhejiang Agricultural and Forestry University, 2005- 2014.

Adjunct Professor of University of Wisconsin-Madison, 2010- 2011.

Graduate School Fellow of University of Wisconsin, Milwaukee 2010 and 2011

### **Participation in Professional Programs:**

2002-2003	Chief curator for the genome annotation as well as leading the analysis of metabolic pathways of <i>Dickeya dadantii</i> 3937 (formerly <i>Erwinia chrysanthemi</i> ); reviewing a multinational group of ~30 investigators on annotation and genomic analyses of
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*D. dadantii* 3937 genome sequencing project.

2004-2005	<i>D. dadantii</i> ASAP genome database coordinator
2004-present	Steering committee, Center for Environmental and Functional Genomics at University of Wisconsin, Milwaukee
2003-present	Ad hoc reviewer of proposals for NSF, USDA, agence-nationale-recherche (ANR; France); Global Centers of Excellence (COE; Japan). Ad hoc reviewer of 18 journals for PNAS (Proceedings of the National Academy of Sciences), PLOS Pathogen, J. Bacteriol., Ap Environ. Microbiol., Mol. Plant-Microbe Interact., BMC Microbiology, J. Proteome Research, European Journal of Plant Pathology, Can. J. Microbiol., Molecular Plant Pathology, J. Appl. Microbiol., Nucleic Acids Research, Microbiology, Plant Disease, Archives of Microbiology, Crop Protection, mBio, Trends in Microbiology.

**Selected Publication in refereed journals. (\*' denotes corresponding author). Impact Factors (IF) are listed in the publications.**

1. Yuan, X., D. Khokhani, X. Wu, F. Yang, G. Biener, B. J. Koestler, V. Raicu, C. He, C. M. Waters, G. W. Sundin, F. Tian\*, and **C.-H. Yang\***. 2015. Cross-talk between regulatory small RNA, cyclic-di-GMP signaling, and flagellar regulator for virulence and bacterial behaviors. Environ. Microbiol. (accepted). **IF-6.201**
2. Yang, F., F. Tian, H. Chen, W. Hutchins, **C.-H. Yang** and C. He\*. 2015. The *Xanthomonas oryzae* pv. *oryzae* PilZ-domain proteins function differentially in cyclic di-GMP binding, and regulation of virulence and motility. Appl. Environ. Microbiol. (In press). **IF- 3.668**
3. Wang S., N. Bai, B. Wang, Z. Feng, W. Hutchins, **C.-H. Yang\*** and Y. Zhao\*. 2015. Characterization of the molecular degradation mechanism of diphenyl ethers by *Cupriavidus* sp. WS. Environ. Sci. Pollut. Res. doi: 10.1007/s11356-015-4854-3. **IF- 2.828**
4. Ibekwe\*, A. M., J. Ma, D. E. Crowley, **C.-H. Yang**, A. M. Johnson, T. C. Petrossian, P. Y. Lum. 2014. Topological Data Analysis of *Escherichia coli* O157:H7 and Non-O157 Survival in Soils. Frontiers in Cellular and Infection Microbiology. 4:122. doi: 10.3389/fcimb.2014.00122. **IF- 3.719**
5. Wu, X, Q. Zeng, B. J. Koestler, C. M. Waters, G. W. Sundin, W. Hutchins, **C.-H. Yang\***. 2014. Deciphering the components that coordinately regulate virulence factors of the soft rot pathogen *Dickeya dadantii*. Mol. Plant-Microbe Interact. 27: 1119-1131. **IF- 4.431**
6. Li, Y., W. Hutchins, Xiaogang Wu, C. Liang, C. Zhang, X. Yuan, D. Khokhani, X. Chen, Y. Che, Q. Wang\*, **C.-H. Yang\***. 2014. Derivative of plant phenolic compound inhibits

the type III secretion system of *Dickeya dadantii* via HrpX/HrpY two-component signal transduction and rsm systems. *Mol. Plant Pathol.* 16:150-163. **IF- 4.485**

7. Ma, J., A. M. Ibekwe\*, D. E. Crowley, **C.-H. Yang**. 2014. Persistence of *Escherichia coli* O157 and non-O157 strains in Agricultural Soils. *Sci. Total Environment.* 490: 822-829. **IF- 3.258**
8. Yang F., F. Tian, X. Li, S. Fan, H. Chen, M. Wu, **C.-H. Yang**, C. He\*. 2014. The degenerate EAL-GGDEF domain protein Filp functions as a cyclic di-GMP receptor and specifically interacts with the PilZ-domain protein PXO\_02715 to regulate virulence in *Xanthomonas oryzae* pv. *oryzae*. *Mol. Plant-Microbe Interact.* 27:578-589.. **IF- 4.431**
9. Tian, L., S. Xu, W. C. Hutchins, **C.-H. Yang**, J. Li\*. 2014. Impact of the exopolysaccharides Pel and Psl on the initial adhesion of *Pseudomonas aeruginosa* to sand. *Biofouling.* 30:213-322. **IF- 3.396**
10. Chang, J. B. S. Mao, Y. Zhang, S. M. Cui, G. H. Zhou, X. G. Wu, **C. H. Yang**, and J. H. Chen\*. 2013. Ultrasonic-assisted Self-assembly of Mono-layer Graphene Oxide for Detection of *Escherichia coli*," *Nanoscale* 5: 3620-3626. **IF-6.233**
11. Khokhani, D., C. Zhang, Y. Li, Q. Wang, Q. Zeng, A. Yamazaki, W. Hutchins, S.-S. Zhou, X. Chen\*, **C.-H. Yang\***. 2013. Discovery of plant phenolic compounds that act as type three secretion system inhibitors or inducers of fire blight pathogen *Erwinia amylovora*. *Appl. Environ. Microbiol.* 79: 5424–5436. **IF- 3.829**
12. Ma, J., A. Ibekwe\*, **C.-H. Yang**, D. E. Crowley. 2013. Influence of bacterial communities based on 454 pyrosequencing on the survival of *Escherichia coli* O157:H7 in soils. *FEMS Microbiol. Ecol.* 84:542-554. **IF- 3.408**
13. Wang, L., S. Xu, A. Yamazaki, **C.-H. Yang**, J. Li\*. 2013. Laboratory Study of *Escherichia coli* O157:H7 Contamination in Groundwater. *J. Environ. Eng.* 10.1061/(ASCE)EE.1943-7870.0000786. **IF-1.399**
14. Ma, J., A. Ibekwe\*, D. E. Crowley, **C.-H. Yang**. 2012. Persistence of *Escherichia coli* O157:H7 in major leafy green producing soils. *Environ. Sci. Technol.* 46:12154-12161. **IF- 5.228**
15. Ma, L., X. Liu, H. Liang, Y. Che, C. Chen, H. Dai, K. Yu, M. Liu, L. Ma, **C.-H. Yang**, F. Song, Y. Wang, and L. Zhang\*. 2012. Effects of 14- $\alpha$ -lipoyl andrographolide on quorum sensing in *Pseudomonas aeruginosa*. *Antimicrob. Agents Chemother.* 56:6088-6094. **IF- 4.841**
16. Yang, F., F. Tian, L. Sun, H. Chen, M. Wu, **C.-H. Yang**, and C. He\*. 2012. A novel two-component system PdeK/PdeR regulates c-di-GMP turnover and virulence of *Xanthomonas oryzae* pv. *oryzae*. *Mol. Plant-Microbe Interact.* 25: 1361-1369. **IF- 4.431**
17. Charkowski, A., C. Blanco, G. Condemine, D. Expert, T. Franza, C. Hayes, N. Hugouvieux-Cotte-Pattat, E. López Solanilla, D. Low, L. Moleleki, M. Pirhonen, A.

- Pitman, N. Perna, S. Reverchon, P. Rodriguez Palenzuela, M. San Francisco, I. Toth, S. Tsuyumu, J. van der Walls, J. van der Wolf, F. Van Gijsegem, **C.-H. Yang**, I. Yedidia. 2012. The role of secretion systems and small molecules in soft-rot enterobacteriace pathogenicity. *Annu. Rev. Phytopathol.* 50:425–449. **IF- 9.875**
18. Zou, L., Q. Zeng, H. Lin, G. Prasad, G. Chen, **C.-H. Yang\***. 2012. SlyA regulates T3SS genes in parallel with the T3SS master regulator HrpL in *Dickeya dadantii* 3937. *Appl. Environ. Microbiol.* 78: 2888–2895. **IF- 3.829**
19. Ma, J., A. M. Ibekwe1\*, M. Leddy, **C.-H. Yang**, and D. E. Crowley. 2012. Assimilable organic carbon (AOC) in soil water extracts using *Vibrio harveyi* BB721 and its implication for microbial biomass. *PloS ONE* 7(5): e28519. **IF- 4.092**
20. Guo, W., L. Zou, Y. Li, Y. Cui, Z. Ji, L. Cai, H. Zou, W. C. Hutchins, **C.-H. Yang\***, and G. Chen\*. 2012. Fructose-Bisphosphate Aldolase Exhibits Functional Roles between Carbon Metabolism and the *hrp* System in Rice Pathogen *Xanthomonas oryzae* pv. *oryzicola*. *PLoS ONE* 7(2): e31855. **IF- 4.092**
21. Yamazaki, A., J. Li, Q. Zeng, D. Khokhani, W. C. Hutchins, A. C. Yost, E. Biddle, E. J. Toone, X. Chen\*, **C.-H. Yang\***. 2012. Derivatives of plant phenolic compound affect the type III secretion system of *Pseudomonas aeruginosa* via a GacS/GacA two component signal transduction system. *Antimicrob. Agents Chemother.* 56: 36-43. **IF- 4.841**
22. Zeng Q., M. D. Laiosa, D. A. Steeber, E. M. Biddle, Q. Peng, and **C.-H. Yang\***. 2012. Cell individuality: the bistable gene expression of T3SS in *Dickeya dadantii* 3937. *Mol. Plant-Microbe Interact.* 25:37-47. **IF- 4.431**
23. Ma, J., A. M. Ibekwe\*, X. Yi, H. Wang, A. Yamazaki, D. E. Crowley, and **C. H. Yang**. 2011. Persistence of *Escherichia coli* O157:H7 and its mutants in soils. *PLoS One* 6:e23191. **IF- 4.092**
24. Li, Y. R., Y. Z. Che, H. S. Zou, Y. P. Cui, W. Guo, L. F. Zou, E. Biddle, **C. H. Yang\***, and G. Y. Chen\*. 2011. Hpa2 required by HrpF to translocate *Xanthomonas oryzae* transcriptional activator-like effectors into rice for pathogenicity. *Appl. Environ. Microbiol.* 77: 3809-3818. **IF- 3.829**
25. Li, Y.-R. H.-S. Zou, Y.-Z. Che, Y.-P. Cui, W. Guo, L.-F. Zou, S. Chatterjee, E. M. Biddle, **C.-H. Yang**, and G.-Y. Chen\*. 2011. A Novel Regulatory Role of HrpD6 in Regulating *hrp-hrc-hpa* Genes in *Xanthomonas oryzae* pv. *oryzicola*. *Mol. Plant-Microbe Interact.* 24: 1086-1101. **IF- 4.431**
26. Glasner, J. D., **C. H. Yang**, S. Reverchon, N. Hugouvieux-Cotte-Pattat, G. Condemine, J. P. Bohin, F. Van Gijsegem, S. Yang, T. Franza, D. Expert, G. Plunkett, 3rd, M. J. San Francisco, A. O. Charkowski, B. Py, K. Bell, L. Rauscher, P. Rodriguez-Palenzuela, A. Toussaint, M. C. Holeva, S. Y. He, V. Douet, M. Boccara, C. Blanco, I. Toth, B. D. Anderson, B. S. Biehl, B. Mau, S. M. Flynn, F. Barras, M. Lindeberg, P. R. Birch, S. Tsuyumu, X. Shi, M. Hibbing, M. N. Yap, M. Carpentier, E. Dassa, M. Umehara, J. F. Kim, M. Rusch, P. Soni, G. F. Mayhew, D. E. Fouts, S. R. Gill, F. R. Blattner, N. T.

- Keen, and N. T. Perna\*. 2011. Genome sequence of the plant-pathogenic bacterium *Dickeya dadantii* 3937. J. Bacteriol. **193**: 2076-2077. **IF- 3.825**
27. Yamazaki, A., J. Li, W. C. Hutchins, L. Wang, J. Ma, A. M. Ibekwe, and **C.-H. Yang\***. 2011. Commensal effect of pectate lyases secreted from *Dickeya dadantii* on the proliferation of *Escherichia coli* O157:H7 EDL933 on lettuce leaves. Appl. Environ. Microbiol. **77**:156-162. **IF- 3.829**
28. Yang, S., Q. Peng, Q. Zhang, L. Zou, Y. Li, C. Robert, L. Pritchard, H. Liu, R. Hovey, Q. Wang, P. Birch, I. K. Toth\*, and **C.-H. Yang\***. 2010. Genome-wide identification of HrpL-regulated genes in the necrotrophic phytopathogen *Dickeya dadantii* 3937. PLoS ONE **5**(10): e13472. **IF- 4.092**
29. Zeng, Q., A. M. Ibekwe, E. Biddle, and **C.-H. Yang\***. 2010. Regulatory mechanisms of exoribonuclease PNPase and regulatory small RNA on T3SS of *Dickeya dadantii*. Mol. Plant-Microbe Interact. **23**: 1345-1355. **IF- 4.431**
30. Yi, X., A. Yamazaki, E. Biddle, Q. Zeng, and **C.-H. Yang\***. 2010. Genetic analysis of two phosphodiesterases reveals cyclic diguanylate regulation of virulence factors in *Dickeya dadantii*. Mol. Microbiol. **77**:787-800. **IF- 5.010**
31. Li, Y., A. Yamazaki, L. Zou, E. Biddle, Q. Zeng, Y. Wang, H. Lin, Q. Wang\*, and **C.-H. Yang\***. 2010. ClpXP protease regulates the Type III Secretion System of *Dickeya dadantii* 3937 and is essential for the bacterial virulence. Mol. Plant-Microbe Interact. **23**:871-878. **IF- 4.431**
32. Ibekwe\*, A. M., Papiernik, S. K., and **C.-H. Yang**. 2010. Influence of soil fumigation by methyl bromide and methyl iodide on rhizosphere and phyllosphere microbial community structure. J. Environ. Sci. Health B **45**: 427-436. **IF- 0.886**
33. Ibekwe\*, A. M., Papiernik, S. K., Grieve, C. M., and **C.-H. Yang**. 2010. Influence of fumigants on soil microbial diversity and survival of *E. coli* O157:H7. J. Environ. Sci. Health B **45**: 416-426. **IF- 0.886**
34. Ibekwe\*, A. M., S. Papiernik, C. Grieve, and **C.-H. Yang**. 2009. Persistence of *Escherichia coli* O157:H7 on the rhizosphere and phyllosphere of lettuce. Lett. Appl. Microbiol. **49**:784-790. **IF- 1.622**
35. Wang, S., L.-Y. Chang, Y.-J. Wang, Q. Wang\*, **C.-H. Yang**, and R.-H. Mei. 2009. Nanoparticles affect the survival of bacteria on leaf surfaces. FEMS Microbiol. Ecol. **28**: 182-191. **IF- 3.408**
36. Li, Y., Q. Peng, D. Selimi, Q. Wang, A. O. Charkowski, X. Chen, and **C.-H. Yang\***. 2009. The plant phenolic compound *p*-coumaric acid represses the *Dickeya dadantii* type III secretion system. Appl. Environ. Microbiol. **75**:1223-1228. **IF- 3.829**

37. Yang, S., Q. Peng, M. San Francisco, Y. Wang, Q. Zeng, and **C.-H. Yang\***. 2008. Type III secretion system genes of *Dickeya dadantii* 3937 are induced by plant phenolic acids. PLoS ONE 3(8): e2973. **IF- 4.092**
38. Glasner, J. D., M. Marquez-Villavicencio, H.-S. Kim, C. E. Jahn, B. Ma, B. S. Biehl, A. I. Rissman, B. Mole, X. Yi, **C.-H. Yang**, J. L. Dangl, S. R. Grant, N. T. Perna1, A. O. Charkowski\*. 2008. Niche-specificity and the variable fraction of the *Pectobacterium* pan-genome. Mol. Plant-Microbe Interact. 21:1549-60. **IF- 4.431**
39. Yap, M.-N., C. Rojas, **C.-H. Yang**, and A. O. Charkowski\*. 2008. The response regulator HrpY of *Dickeya dadantii* 3937 regulates virulence genes not linked to the *hrp* cluster. Mol. Plant-Microbe Interact. 21: 304-314. **IF- 4.431**
40. Yang, S., Q. Peng, Q. Zhang, X. Yi, C. J. Choi, R. M. Reedy, A. O. Charkowski, and **C.-H. Yang\***. 2008. Dynamic regulation of GacA in type III secretion system, pectinase gene expression, pellicle formation, and pathogenicity of *Dickeya dadantii*. Mol. Plant-Microbe Interact. 21:133-142. **IF- 4.431**
41. Yang L., **C.-H. Yang**, and J. Li\*. 2008. Adhesion and Retention of a Bacterial Phytopathogen *Erwinia Chrysanthemi* in Biofilm-Coated Porous Media. Environ. Sci. Technol. 42: 159–165. . **IF- 5.228**
42. Wang, Y.; H. Wang, **C.-H. Yang**, Q. Wang\*, and R. Mei. 2007. Two distinct manganese-containing superoxide dismutase genes in *Bacillus cereus*: their physiological characterizations and roles in surviving in wheat rhizosphere. FEMS Microbiol. Lett. 272:206-213. **IF-2.044**
43. Yang, S., Q. Zhang, J. Guo, A. O. Charkowski, B. R. Glick, A. M. Ibekwe, D. A. Cooksey, and **C.-H. Yang\***. 2007. Global effect of Indole-3-acetic acid (IAA) biosynthesis on multiple virulence factors of *Erwinia chrysanthemi* 3937. Appl. Environ. Microbiol. 73:1079-1088. **IF- 3.829**
44. Ibekwe\*, A. M., Grieve, C. M. and **C.-H. Yang**. 2007. Survival of *E. coli* O157:H7 in soil after fumigation by real-time PCR quantification. Can. J. Microbiol. 53:623-635. **IF- 1.363**
45. Ahn, S.-J., **C.-H. Yang**, and D. A. Cooksey\*. 2007. *Pseudomonas putida* 06909 genes expressed during colonization on mycelial surfaces and phenotypic characterization of mutants. J. Appl. Microbiol. 103:120-32. **IF- 2.337**
46. Yang L., **C.-H. Yang**, and J. Li\*. 2007. Influence of extracellular polymeric substances (EPS) on *Pseudomonas aeruginosa* transport and deposition profiles in porous media. Environ. Sci. Technol. 41:198-205. **IF- 5.228**
47. Ibekwea\*, A. M., A. C. Kennedy, J. J. Halvorson, C.-H. Yang. 2007. Characterization of developing microbial communities in Mount. St. Helens pyroclastic substrate. Soil Biology & Biochemistry 39: 2496–2507. **IF- 3.504**

48. Okinaka, Y., N. T. Perna, S. Yang, N. T. Keen, and **C.-H. Yang\***. 2006. Identification of new virulence genes in *Erwinia chrysanthemi* 3937; transposon insertion into plant up-regulated genes. *J. Gen. Plant Pathology* 72: 360-368. **IF- 0.689**
49. Yap, M.-N., C. Rojas, C.-H., Yang, and **A. O. Charkowski\***. 2006. Harpin mediates cell aggregation in *Erwinia chrysanthemi* 3937. *J. Bacteriol* 188:2280-2284. **IF- 3.825**
50. Peng Q., S. Yang, A. O. Charkowski, M.-N. Yap, D. A. Steeber, N. T. Keen, and **C.-H. Yang\***. 2005. Population behavior analysis of *dspE* and *pelD* regulation in *Erwinia chrysanthemi* 3937. *Mol. Plant-Microbe Interact.* 19:451-457. **IF- 4.431**
51. Yang, L., Y.-H. Zhaoa, B.-X. Zhang, **C.-H. Yang**, and X. Zhang\*. 2005. Isolation and characterization of a chlorpyrifos and 3,5,6-trichloro-2-pyridionol degrading bacterium. *FEMS Microbiol. Lett.* 251:67-73. **IF- 2.044**
52. Kawai T., **C.-H. Yang**, M. R. Matsumoto, D. E. Crowley, and J. D. Sheppard\*. 2005. Comparison of PCR-DGGE and selective plating methods for monitoring the dynamics of a mixed culture population in synthetic brewery wastewater. *Biotechnol. Prog.* 21:712-719. **IF- 2.304**
53. Yap, M.-N., **C.-H. Yang**, J. D. Barak, and A. O. Charkowski\*. 2005. The *Erwinia chrysanthemi* type III secretion system is required for multicellular behavior. *J. Bacteriol.* 187:639-648. **IF- 3.825**
54. Alvey S., **C.-H. Yang**, A. Buerkert\*, D. E. Crowley. 2005. Bacterial ecology of ancient Saharan salt-enrichment ponds at Teguida-n-Tessoumt. *J. Plant. Nutr.* 168:489-495. **IF- 0.526**
55. Ibekwe\*, A. M., S. K. Papiernik, **C.-H. Yang**. 2004. Enrichment and molecular characterization of chloropicrin- and metam-sodium-degrading microbial communities. *Appl. Microbiol. Biotechnol.* 66:325-332. **IF- 3.425**
56. Yang, S., N. T. Perna, D. A. Cooksey, Y. Okinaka, S. E. Lindow, A. M. Ibekwe, N. T. Keen, and **C.-H Yang\***. 2004. Genome-wide identification of plant-upregulated genes of *Erwinia chrysanthemi* 3937 using a GFP-based IVET leaf array. *Mol. Plant-Microbe Interact.* 17:999-1008. **IF- 4.431**
57. Marschner\*, P., D. Crowley and **C.-H. Yang**. 2004. Development of specific rhizosphere bacterial communities in relation to plant species, nutrition and soil type. *Plant and Soil.* 261: 199-208. **IF- 2.733**
58. Alvey, S., **C.-H. Yang**, A. Buerkert, and D. E. Crowley\*. 2003. Cereal/legume rotation effects on rhizosphere bacterial community structure in West African soils. *Biol Fert. Soils* 37:73-82. **IF- 2.319**
59. **Yang, C.-H.**, M. Gavilanes-Ruiz, Y. Okinaka, R. Vedel, I. Bethuy, M. Boccara, J. W. Chen, N. T. Perna, and N. T. Keen\*. 2002. *hrp* genes of *Erwinia chrysanthemi* 3937 are important virulence factors. *Mol. Plant-Microbe Interact.* 15:472-480. **IF- 4.431**

60. Okinaka\*, Y., **C.-H. Yang**, N. T. Perna and N. T. Keen. 2002. Microarray profiling of *Erwinia chrysanthemi* 3937 genes that are regulated during plant infection. *Mol. Plant-Microbe Interact.* 15:619-629. (MPMI Spotlight and cover page) **IF- 4.431**
61. Okinaka\*, Y., **C.-H. Yang**, E. Herman, A. Kinney, and N. T. Keen. 2002. The P34 elicitor interacts with a soybean photorespiration enzyme, NADH-dependent hydroxypyruvate reductase. *Mol. Plant-Microbe Interact.* 15:1213-1218. **IF- 4.431**
62. Luepromchai, E., A. C. Singer, **C.-H. Yang** and D. E. Crowley\*. 2002. Interactions of earthworms with indigenous and bioaugmented PCB-degrading bacteria. *FEMS Microbiol. Ecol.* 41: 191-197. **IF- 3.408**
63. Ibekwe\* A. M., A. C. Kennedy, P. S. Frohne, S. K. Papiernik, **C.-H. Yang**, and D. E. Crowley. 2002. Microbial diversity along a transect of agronomic zones. *FEMS Microbiol. Ecol.* 39:183-191. **IF- 3.408**
64. **Yang, C.-H.**, D. E. Crowley, J. Borneman, and N. T. Keen\*. 2001. Microbial phyllosphere populations are more complex than previously realized. *Proc. Natl. Acad. Sci. USA* 98:3889-3894. **IF- 9.681**
65. **Yang, C.-H.**, D. E. Crowley\*, and J. A. Mange. 2001. 16S rDNA fingerprinting of rhizosphere bacterial communities associated with healthy and phytophthora infected avocado roots. *FEMS Microbiol. Ecol.* 35:129-136. **IF- 3.408**
66. Marschner\*, P., **C.-H. Yang**, R. Lieberei, D. E. Crowley. 2001. Soil and plant specific effects on bacterial community composition in the rhizosphere. *Soil Biol. Biochem.* 33:1437-1445. **IF- 3.504**
67. Ibekwe\* A. M., S. K. Papiernik, J. Gan, S. R. Yate, D. E. Crowley, and **C.-H. Yang**. 2001. Microcosm enrichment of 1, 3-Dichloropropene-degrading microbial communities. *J. of Appl. Microbiol.* 91:668-676. **IF- 2.337**
68. Ibekwe\* A. M., S. K. Papiernik, J. Gan, S. R. Yate, **C.-H. Yang**, and D. E. Crowley. 2001. Impact of fumigants on soil microbial community. *Appl. Environ. Microbiol.* 67:3245-3257. **IF- 3.829**
69. **Yang\***, **C.-H.**, D. E. Crowley, G. H. Anthony, and N. T. Keen. 2000. Strain level identification of *Pseudomonas* using denaturing gradient gel electrophoresis of 16S-23S spacer region rDNA. *J. Gen. Plant Pathology* 66:225-233. **IF- 0.689**
70. **Yang, C.-H.**, and D. E. Crowley\*. 2000. Rhizosphere microbial community structure in relation to root location and plant iron nutritional status. *Appl. Environ. Microbiol.* 66:345-351. **IF- 3.829**
71. He X., K. Harper, G. Grantham, **C.-H. Yang**, R. Creamer\*. 1998. Serological characterization of the 3'-proximal encoded proteins of beet yellows closterovirus. *Arch. Virol.* 143: 1349-1363. **IF- 2.111**



72. **Yang, C.-H.**, H. R. Azad, and D. A. Cooksey\*. 1996. A chromosomal locus required for copper resistance, competitive fitness, and cytochrome c biogenesis in *Pseudomonas fluorescens*. Proc. Natl. Acad. Sci. USA 93:7315-7320. **IF- 9.681**
73. **Yang, C.-H.**, J. A. Menge, and D. A. Cooksey\*. 1994. Mutation affecting hyphal colonization and pyoverdine production in pseudomonads toward *Phytophthora parasitica*. Appl. Environ. Microbiol. 60:473-481. **IF- 3.829**
74. **Yang, C.-H.**, J. A. Menge, and D. A. Cooksey\*. 1993. Role of copper resistance in competitive survival of *Pseudomonas fluorescens* in soil. Appl. Environ. Microbiol. 57:580-584. **IF- 3.829**

### **Books and Monographs.**

Zeng, Q., and **C.-H. Yang**. Post-transcriptional and post-translational regulatory mechanisms for virulence factors. 2015. In G. Sundin et al. (eds.) Virulence mechanism of phytopathogenic bacteria. APS PRESS. St. Paul, MN (Book chapter).

**Yang, C.-H.** and S.-H. Yang. 2008. Managing bacterial plant diseases by modulating quorum sensing and Type III secretory systems. In: Z.K. Punja, S.H. De Boer and H. Sanfacon (eds.) Biotechnology and Plant Disease Management. CABI Publishing. Oxfordshire. UK. P. 16-57. (Book chapter)

Crowley\*, D.E., E.S. Gilbert, A. Singer, D. Newcombe, and **C.-H. Yang**. 1999. Bioremediation of organic contaminants using repeated applications of xenobiotic degrading bacteria. In: R. Fass, Y Flashner, and S. Reuveny (eds.) Novel Methods for Bioremediation of Organic Pollution. Plenum Press. NY. p. 273-284.

### **Minireview:**

Keen\*, N. T., C. K. Dumenyo, **C.-H. Yang**, and D. A. Cooksey. 2000. From rags to riches: insights from the first genomic sequence of a plant pathogenic bacterium. Genome Biology 1: 1019.1-1019.4.

Keen\*, N. T. and **C.-H. Yang**. 1999. Functional genomics: Plant-Microbe interactions gingerly puts a foot in the water. Physiol. and Mol. Plant Pathology 55:313-315.

### **Invited seminars at professional meetings (last five years):**

**Invited Keynote Speaker and chair** at 13th International Conference on Plant Pathogenic Bacteria (ICPPB), Shanghai, China, June 8-13, 2014.

**Session Organizer and Chair** of Bacterial Genomics and Proteomics at 10<sup>th</sup> International Congress of Plant Pathology, Beijing, China, August 25-31, 2013.

Invited speaker “Regulatory mechanisms of exoribonuclease and regulatory small RNA on T3SS.” The 2nd Beijing International Symposium on Molecular Plant Pathology, Beijing, China, Aug. 25, 2013.

Invited speaker of 111 project “Cell Individuality: The bistable gene expression of the type III secretion system” at Theory and technology innovation for control of crop disease. China Agricultural University, Beijing, China, August 24, 2013.

Invited speaker “Molecular Characterization of regulatory RNA *rsmB* that controls type III secretion system.” Shanghai Jiao Tong University, Shanghai, China, Aug. 14, 2013.

Invited seminar “Cell individuality: the bistable gene expression orchestrates the life style of a bacterial pathogen”. Taiwan National University, Taipei, Taiwan, August 1, 2013.

Invited seminar “Regulatory mechanisms of exoribonuclease and regulatory small RNA on T3SS” Academia Sinica, Taipei, Taiwan, July 31, 2013.

Invited seminar” Effect of cyclic-di-GMP on bacterial virulence” Zhejiang A & F University, June 17, 2013.

Invited seminar “Cyclic-di-GMP and bistable gene expression help determine lifestyle choices for a bacterial plant pathogen.” Marquette University, October 26, 2012.

Invited seminar “C-di-GMP and bistable gene expression: emergent properties orchestrating bacterial life style.” National Chung Hsing University, Taiwan, June 28, 2012.

Invited seminar “A lifestyle choice for ecological success and pathogenicity: c-di-GMP and heterogeneous gene expression”. Academia Sinica, Taipei, Taiwan. June 20, 2012.

Invited seminar “Heterogeneous gene expression of T3SS between individual cells: a lifestyle choice for ecological success” Chinese Academy of Sciences, Beijing, China. June 15, 2012.

Invited seminar “The role of regulatory small RNA in T3SS regulation in *Dickeya dadantii*”. Institute of Plant Protection, Chinese Academy of Agricultural Sciences, Beijing. June 14, 2012.

Invited seminar “ C-di-GMP and bistable gene expression: emergent properties orchestrating bacterial life style”. Zhejiang University, June 5, 2012.

Invited seminar “Development of antivirulence therapies by targeting type III secretion system of bacterial pathogens” Changzhou University, China. June 4, 2012

Invited seminar “c-di-GMP: a ubiquitous secondary messenger regulating motility, biofilm formation, and virulence in bacteria” Zhejiang Agricultural & Forestry University, China. May 31, 2012.

Invited seminar “C-di-GMP: a ubiquitous signaling system orchestrating lifestyle of bacteria” Milwaukee Microbiology Society. the Great Lakes WATER Institute. November 9, 2011.

Invited Seminar “Development of novel antimicrobials targeting virulence factors of pathogens” Xinjiang Academy of Agricultural and Reclamation Science, Shihezi, Xinjiang, China, August 15-16, 2011.

**Invited Keynote Speaker**, “C-di-GMP: a novel signaling system orchestrating bacterial life style” The First Beijing International Symposium on Molecular Plant Pathology, Beijing, China, July 24-25, 2011.

Invited seminar “Cell individuality: the bistable gene expression of T3SS in *Dickeya dadantii* 3937” College of Agriculture and Biology, Shanghai Jiaotong University, Shanghai, China, July 18, 2011.

Invited Seminar, “Genetic analysis of c-di-GMP signaling and virulence in *Dickeya dadantii* 3937” Michigan State University, November 14-16, 2010.

Invited Seminar, “Characterization of C-di-GMP Second Messenger Signaling System in *Dickeya dadantii* 3937” Institute of Plant Protection, Chinese Academy of Agricultural Sciences, Beijing, China, October 17, 2010.

Invited Seminar, “Development of novel antimicrobial agents; Type III secretion inhibitors” China Agricultural University, Beijing, China, October 15, 2010.

Invited seminar “Genome-wide identification of virulence genes of *Dickeya dadantii* by microarray and FACS assays: Applications for disease management” AVRDC - The World Vegetable Center, Tainan, November 25, 2009

Invited seminar “Antivirulence therapy: development of virulence specific therapeutics by targeting bacterial T3SS” Academia Sinica, Taipei, Taiwan, November 18, 2009.

**Section Chair and Invited Seminar**, “Characterization of GGDEF EAL proteins in *Dickeya dadantii* 3937 and their effect on type III secretion system” 7<sup>th</sup> Hangzhou International Symposium on Plant Pathology and Biotechnology, Zhejiang University, Hangzhou, October 22-25, 2009.

Invited seminar “Development of novel antivirulence-based drugs by targeting bacterial T3SS” College of Agriculture and Biology, Shanghai Jiaotong University, Shanghai, China, October 19, 2009.

Invited Seminar “Development of target specific antimicrobial agents and their potential effect on microbial community” Smithsonian Tropical Research Institute, Barro Colorado Island, Panama, May 18-22, 2009.

**Co-organizer and Invited Seminar**, “Decipher the type III secretion system of *Dickeya dadantii* by genomic and functional genomic approaches” US-China Workshop on Plant

Pathology and Biotechnology, China Agricultural University, Beijing, China, June 14-26, 2009.

Invited seminar “Structure-activity relationship of phenolic compounds and its effect on T3SS of *Erwinia chrysanthemi* (*Dickeya dadantii*)” Nanjing Agricultural University, Nanjing, China, July 17, 2008.