Curriculum Vitae

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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 Research, 2018-2021
Editor, PLoS ONE, 2008-present.
Senior Editor, Phytopathology, 2012-2014.
Editorial Board, Applied Environmental Microbiology, 2009-2012.
Distinguished (Gugan) Professor of 111 project, China Agricultural University, China, 2012-2016.
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 *Dickeya dadantii* 3937 (formerly *Erwinia chrysanthemi*); reviewing a multinational group of ~30 investigators on annotation and genomic analyses of

D. dadantii 3937 genome sequencing project.

2004-2005	*D. dadantii* 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., Appl Environ Microbiol., Mol Plant-Microbe Interact., BMC Microbiol., J Proteome Research, Eur J Plant Pathol., Can J Microbiol., Mol Plant Pathol., J Appl Microbiol., Nucleic Acid Res., Microbiology, Plant Dis., Arch Microbiol., Crop Protect., mBio, Trends Microbiol..

Selected Publication in refereed journals ('*' denotes corresponding author).

1. Xiaochen Y., Zeng Q., Xu J., Severin G., Zhou X., Waters C., Sundin G., Ibekwe A., Liu F. * and **Yang C.-H. ***. 2020. Tricarboxylic Acid (TCA) Cycle Enzymes and Intermediates Modulate Intracellular Cyclic di-GMP Levels and the Production of Plant Cell Wall–Degrading Enzymes in Soft Rot Pathogen *Dickeya dadantii*. Mol Plant-Microbe Interact. 33:296-307. **IF- 4.431**

2. Fan S., Tian F., Fang L., **Yang C.-H.**, and C. He *. 2019. Transcriptional responses of *Xanthomonas oryzae* pv. *oryzae* to type III secretion system inhibitor ortho-coumaric acid. BMC Microbiol. 19:163. doi: 10.1186/s12866-019-1532-5. **IF-3.287**

3. Yang F., Xue D., Tian F., Hutchins W., **C.-H. Yang** and He C. *. 2019. Identification of c-di-GMP signaling components in *Xanthomonas oryzae* and their orthologs in Xanthomonads involved in regulation of bacterial virulence expression. Front Microbiol. 10:1402. doi: 10.3389/fmicb.2019.01402. **IF- 4.259**

4. Yuan X., Zeng Q., Khokhani D., Tian F., Severin G. B., Waters C. M., Xu J., Zhou X., Sundin G. W., Ibekwe A., Liu F. * and **Yang C.-H. ***. 2019. A Feed-forward signaling circuit controls bacterial virulence through linking cyclic di-GMP and two mechanistically distinct sRNAs; ArcZ and RsmB. Environ Microbiol. 21:2755-2771. **IF-6.201**

5. Fan S., Tian F., Fang L., **Yang C.-H.** and He C. *. 2019. Transcriptional responses of *Xanthomonas oryzae* pv. *oryzae* to type III secretion system inhibitor ortho-coumaric acid. BMC Microbiol. 19(1), 163. **IF-3.287**

6. Cui Z., **Yang C.-H.**, Kharadi R., Yuan X., Sundin G., Triplett L., Wang J. and Zeng Q. *. 2019. Cell-length heterogeneity: a population-level solution to growth/virulence trade-offs in the plant pathogen *Dickeya dadantii*. PLoS Pathog. 15(8): e1007703. **IF- 6.463**

7. Li L., Ma J., Ibekwe A. *, Wang Q. * and **Yang C.-H.**. 2018. Influence of *Bacillus subtilis* B068150 on cucumber rhizosphere microbial composition as a plant protective agent. Plant Soil. 429.1-2: 519-531. **IF- 3.259**

8. Yu C., Chen H., Tian F., Yang F., Yuan X., **Yang C.-H.** and He C. *. 2018 A ten gene-containing genomic island determines flagellin glycosylation: implication for its regulatory role in motility and virulence of *Xanthomonas oryzae* pv. *oryzae*. Mol Plant Pathol. 19.3: 579-592. **IF- 4.485**

9. Zeng* Q., Cui Z., Wang J., Childs K. , Sundin G. , Cooley D., **Yang C.-H.**, Garofalo E., Eaton A., Huntley R. , Yuan X., and Schultes N. 2018. Comparative genomics of Spiraeoideae-infecting *Erwinia amylovora* strains provides novel insight to genetic diversity and identifies the genetic basis of a low-virulence strain. Mol Plant Pathol. 19(7): 1652-1666. **IF- 4.485**

10. Bhawana T. Zhou G., Chang J., Pu H., Jin B., Sui X., Yuan X., **Yang C.-H.**, Magruder M., and Chen J. *. 2018. Rapid Detection of Single *E. coli* Bacteria Using a Graphene-based Field-Effect Transistor Device. Biosens Bioelectron. 110:16-22. **IF- 9.518**

11. Xue D., Tian F., Yang F., Chen H., Yuan X., **Yang C.-H.**, Chen Y., Wang Q. and He C. *. 2018. Phosphodiesterase EdpX1 promotes virulence, exopolysaccharide production and biofilm formation in *Xanthomonas oryzae* pv. *oryzae*. Appl Environ Microbiol. 84:e01717-18. **IF- 3.829**

12. Li H., Xue D., Tian F., Yuan X., Yang F., Chen H., Hutchins W., **Yang C.-H.** and He C. *. 2018. *Xanthomonas oryzae* pv. *oryzae* response regulator TriP regulates virulence and exopolysaccharide production via interacting with c-di-GMP phosphodiesterase PdeR. Mol. Plant-Microbe Interact. 32(6): 729-739. **IF- 4.431**

13. Cui Z., Yuan, X., **Yang C.-H.**, Huntley R., Sun, W., Wang, J., Sundin G., and Zeng Q. *. 2018. Development of a method to monitor gene expression in single bacterial cells during the interaction with plants and use to study the expression of the type III secretion system in single cells of *Dickeya dadantii* in potato. Front Microbiol. 9: 1429. **IF- 4.259**

14. Yuan X., Tian F., He C., Severin G., Waters C. , Zeng, Q., Liu F., and **Yang C.-H. ***. 2018. The diguanylate cyclase GcpA inhibits the production of pectate lyases via the H-NS protein and RsmB regulatory RNA in *Dickeya dadantii*. Mol Plant Pathol. 19-8: 1873-1886. **IF- 4.485**

15. Fan S., Tian F., Li J., Hutchins W., Chen H., Yang F., Yuan X., Cui Z., **Yang C.-H.** and He C. *. 2017. Identification of phenolic compounds that suppress the virulence of *Xanthomonas oryzae* on rice via the type III secretion system. Mol Plant Pathol., 18.4: 555-568. **IF- 4.485**

16. Patel R., Sundin G., **Yang C.-H.**, Wang, J., Huntley R., Yuan, X. and Zeng Q. *. 2017. Exploration of using antisense peptide nucleic acid (PNA)-cell penetrating peptide (CPP) as a novel bactericide against fire blight pathogen *Erwinia amylovora*. Front Microbiol. 2017; 8. **IF- 4.259**

17. Zeng* Q., Wang, J., Bertels F., Giordano P., Chilvers M., Huntley R., Vargas J., Sundin G., Jacobs J., and **Yang C.-H.**. 2017. Recombination of virulence genes in divergent *Acidovorax avenae* strains that infect a common host. Mol Plant-Microbe Interact. 30.10: 813-828. **IF- 4.431**

18. Ma J., Ibekwe A. *, **Yang C.-H.** and Crowley D.. 2016. Bacterial diversity and composition in major fresh produce growing soils affected by physiochemical properties and geographic

locations. Sci Total Environ. 563: 199-209. **IF- 5.589**

19. Yang F., Qian S., Tian F., Chen H., Hutchins W., **Yang C.-H.** and He C. *. 2016. The GGDEF-domain protein GdpX1 attenuates motility, exopolysaccharide production and virulence in *Xanthomonas oryzae* pv. *oryzae*. J Appl Microbiol.120.6: 1646-1657. **IF-2.683**

20. Yu C., Wang N., Wu M., Tian F., Chen H., Yang F., Yuan X., **Yang C.-H.** and He C. *. 2016. OxyR-regulated catalase CatB promotes the virulence in rice via detoxifying hydrogen peroxide in *Xanthomonas oryzae* pv. *oryzae*. BMC Microbiol. 16:269. **IF- 3.287**

21. Li L., Ma J., Ibekwe A. *, Wang Q. *, and **Yang C.-H.**. 2016. Cucumber rhizosphere microbial community response to biocontrol agent *Bacillus subtilis* B068150. Agriculture. 6.1: 2.

22. Yuan X., Khokhani D., Wu X., Yang F., Biener G., Koestler B., Raicu V., He C., Waters C., Sundin G., Tian F. and **Yang C.-H. *.** 2015. Cross-talk between regulatory small RNA, cyclic-di-GMP signaling, and flagellar regulator for virulence and bacterial behaviors. Environ Microbiol. 17-11: 4745-4763. **IF-6.201**

23. Yang F., Tian F., Chen H., Hutchins W., **Yang C.-H.** and He C. *. 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. 13:4358-4367. **IF- 3.668**

24. Wang S., Bai N., Wang B., Feng Z., Hutchins W., **Yang C.-H.** and Zhao Y. *. 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**

25. Ibekwe*A., Ma J., Crowley D., **Yang C.-H.**, Johnson A., Petrossian T., Lum P.. 2014. Topological Data Analysis of *Escherichia coli* O157:H7 and Non-O157 Survival in Soils. Front Cell Infect Microbiol. 4:122. doi: 10.3389/fcimb.2014.00122. **IF- 3.719**

26. Wu X., Zeng Q., Koestler B., Waters C., Sundin G., Hutchins W. and **Yang C.-H. *.** 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**

27. Li Y., Hutchins W., Wu Xiao., Liang C., Zhang C., Yuan X., Khokhani D., Chen X., Che Y., Wang Q. and **Yang C.-H.***. 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**

28. Ma J., Ibekwe* A., Crowley D. and **Yang C.-H.**. 2014. Persistence of *Escherichia coli* O157 and non-O157 strains in Agricultural Soils. Sci Total Environ. 490: 822- 829. **IF-3.258**

29. Yang F., Tian F., Li X., Fan S., Chen H., Wu M., **Yang C.-H.** and He C. *. 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**

30. Tian L., Xu S., Hutchins W., **Yang C.-H.** and Li J. *. 2014. Impact of the exopolysaccharides Pel and Psl on the initial adhesion of *Pseudomonas aeruginosa* to sand. Biofouling. 30:213-322. **IF- 3.396**

31. Chang J., Mao S., Zhang Y., Cui S., Zhou G., Wu X., **Yang C.-H.** and Chen J.. 2013. Ultrasonic-assisted Self-assembly of Mono-layer Graphene Oxide for Detection of *Escherichia coli*. Nanoscale 5: 3620-3626. **IF-6.233**

32. Khokhani D., Zhang C., Li Y., Wang Q., Zeng Q., Yamazaki A., Hutchins W., Zhou S.-S., Chen X. and **Yang C.-H.**. 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**

33. Ma, J., Ibekwe A., **Yang C.-H.** and Crowley D.. 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**

34. Wang L., Xu S., Yamazaki A., **Yang C.-H.** and Li J.. 2013. Laboratory Study of *Escherichia coli* O157:H7 Contamination in Groundwater. J Environ Eng. 10.1061/(ASCE)EE.1943-7870.0000786. **IF-1.399**

35. Ma J., Ibekwe A., Crowley D. and **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**

36. Ma, L., Liu X., Liang H., Che Y., Chen C., Dai H., Yu K., Liu M., Ma L., **Yang C.-H.**, Song F., Wang Y., and Zhang L.. 2012. Effects of 14-alpha-lipoyl andrographolide on quorum sensing in *Pseudomonas aeruginosa*. Antimicrob Agents Chemother. 56:6088-6094. **IF- 4.841**

37. Yang F., Tian F., Sun L., Chen H., Wu M., **Yang C.-H.**, and He C.. 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**

38. Charkowski A., Blanco C., Condemine G., Expert D., Franza T., Hayes C., Hugouvieux-Cotte-Pattat N., Solanilla E. , Low D., Moleleki L., Pirhonen M., Pitman A., Perna N., Reverchon S., Palenzuela P., San Francisco M., Toth I., Tsuyumu S., van der Walls J., van der Wolf J., Van Gijsegem F., **Yang C.-H.** and Yedidia I.. 2012. The role of secretion systems and small molecules in soft-rot enterobacteriace pathogenicity. Annu Rev Phytopathol. 50:425–449. **IF- 9.875**

39. Zou, L., Zeng Q., Lin H., Prasad G., Chen G. and **Yang C.-H.**. 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**

40. Ma, J., Ibekwe1A. , Leddy M., **Yang C.-H.** and Crowley D.. 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**

41. Guo W., Zou L., Li Y., Cui Y., Ji Z., Cai L., Zou H., Hutchins W., **Yang C.-H.** and Chen G.. 2012. Fructose-Bisphophate 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**

42. Yamazaki A., Li J., Zeng Q., Khokhani D., Hutchins W., Yost A., Biddle E., Toone E., Chen X. and **Yang C.-H.**. 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**

43. Zeng Q., Laiosa M., Steeber D., Biddle E., Peng Q. and **Yang C.-H.**. 2012. Cell individuality: the bistable gene expression of T3SS in *Dickeya dadantii* 3937. Mol Plant-Microbe Interact. 25:37-47. **IF- 4.431**

44. Ma, J., Ibekwe A., Yi X., Wang H., Yamazaki A., Crowley D. and **Yang C.-H.**. 2011. Persistence of *Escherichia coli* O157:H7 and its mutants in soils. PLoS One 6:e23191. **IF- 4.092**

45. Li, Y., Che Y., Zou H., Cui Y., Guo W., Zou L. , Biddle E., **Yang C.-H.**, and Chen G.. 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**

46. Li Y., Zou H., Che Y., Cui Y., Guo W., Zou L., Chatterjee S., Biddle E., **Yang C.-H.** and Chen G.. 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**

47. Glasner, J., **Yang C. -H.**, et al.. 2011. Genome sequence of the plant-pathogenic bacterium *Dickeya dadantii* 3937. J Bacteriol. **193**: 2076-2077. **IF- 3.825**

48. Yamazaki A., Li J., Hutchins W., Wang L., Ma J., Ibekwe A., and **Yang C.-H.**. 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**

49. Yang S., Peng Q., Zhang Q., Zou L., Li Y., Robert C., Pritchard L., Liu H., Hovey R., Wang Q., Birch P., Toth I. and **Yang C.-H.**. 2010. Genome-wide identification of HrpL-regulated genes in the necrotrophic phytopathogen *Dickeya dadantii* 3937. PLoS ONE 5(10): e13472. **IF- 4.092**

50. Zeng Q., Ibekwe A., Biddle E. 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**

51. Yi X., Yamazaki A., Biddle E., Zeng Q. and **Yang C.-H.**. 2010. Genetic analysis of two phosphodiesterases reveals cyclic diguanylate regulation of virulence factors in *Dickeya dadantii*. Mol Microbiol. 77:787-800. **IF- 5.010**

52. Li Y., Yamazaki A., Zou L., Biddle E., Zeng Q., Wang Y., Lin H., Wang Q. and **Yang C.-**

H.. 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**

53. Ibekwe A., Papiernik S. and **Yang C.-H.**. 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**

54. Ibekwe A., Papiernik S., Grieve C. and **Yang C.-H.**. 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**

55. Ibekwe A., Papiernik S., Grieve C. and **Yang C.-H.**. 2009. Persistence of *Escherichia coli* O157:H7 on the rhizosphere and phyllosphere of lettuce. Lett Appl Microbiol. 49:784-790. **IF- 1.622**

56. Wang S., Chang L., Wang Y., Wang Q., **Yang C.-H.** and Mei R.. 2009. Nanoparticles affect the survival of bacteria on leaf surfaces. FEMS Microbiol Ecol. 28: 182-191. **IF- 3.408**

57. Li Y., Peng Q., Selimi D., Wang Q., Charkowski A., Chen X. and **Yang C.-H.**. 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**

58. Yang S., Peng Q., San Francisco M., Wang Y., Zeng Q. and **Yang C.-H.**. 2008. Type III secretion system genes of *Dickeya dadantii* 3937 are induced by plant phenolic acids. PLoS ONE 3(8): e2973. **IF- 4.092**

59. Glasner J., Marquez-Villavicencio M., Kim H., C. Jahn E., Ma B., Biehl B., Rissman A., Mole B., Yi X., **Yang C.-H.**, Dangl J., Grant S., Perna1N. and Charkowski A.. 2008. Niche-specificity and the variable fraction of the *Pectobacterium* pan-genome. Mol Plant-Microbe Interact. 21:1549-60. **IF- 4.431**

60. Yap M., Rojas C., **Yang C.-H.** and Charkowski A.. 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**

61. Yang S., Peng Q., Zhang Q., Yi X., Choi C., Reedy R., Charkowski A. and **Yang C.-H.**. 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**

62. Yang L., **Yang C.-H.** and Li J.. 2008. Adhesion and Retention of a Bacterial Phytopathogen *Erwinia Chrysanthemi* in Biofilm-Coated Porous Media. Environ Sci Technol. 42: 159–165. **IF- 5.228**

63. Wang Y., Wang H., **Yang C.-H.**, Wang Q. and Mei R.. 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**

64. Yang S., Zhang Q., Guo J., Charkowski A., Glick B., Ibekwe A., Cooksey D. and **Yang C.-H.**. 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**

65. Ibekwe A., Grieve C. and **Yang C.-H.**. 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**

66. Ahn S., **Yang C.-H.** and Cooksey D.. 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**

67. Yang L., **Yang C.-H.** and Li J.. 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**

68. Ibekwea A., Kennedy A., Halvorson J. and **Yang C.-H.**. 2007. Characterization of developing microbial communities in Mount. St. Helens pyroclastic substrate. Soil Biol Biochem. 39: 2496–2507. **IF- 3.504**

69. Okinaka Y., Perna N., Yang S., Keen N. and **Yang C.-H.**. 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**

70. Yap M., Rojas C., **Yang C.-H.** and **Charkowski A.**. 2006. Harpin mediates cell aggregation in *Erwinia chrysanthemi* 3937**.** J Bacteriol 188:2280-2284. **IF- 3.825**

71. Peng Q., Yang S., Charkowski A., Yap M., Steeber D., Keen N. and **Yang C.-H.**. 2005. Population behavior analysis of *dspE* and *pelD* regulation in *Erwinia chrysanthemi* 3937. Mol Plant-Microbe Interact. 19:451-457. **IF- 4.431**

72. Yang L., Zhao Y., Zhang B., **C.-H. Yang** and Zhang X.. 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**

73. Kawai T., **Yang C.-H.**, Matsumoto M., Crowley D. and Sheppard J.. 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**

74. Yap M., **Yang C.-H.**, Barak J., and Charkowski A.. 2005. The *Erwinia chrysanthemi* type III secretion system is required for multicellular behavior. J Bacteriol. 187:639-648. **IF-3.825**

75. Alvey S., **Yang C.-H.,** Buerkert A. and Crowley D.. 2005. Bacterial ecology of ancient

Saharan salt-enrichment ponds at Teguidda-n-Tessoumt. J Plant Nutr. 168:489-495. **IF- 0.526**

76. Ibekwe A., Papiernik S. and **Yang C.-H.**. 2004. Enrichment and molecular characterization of chloropicrin- and metam-sodium-degrading microbial communities. Appl. Microbiol. Biotechnol. 66:325-332. **IF- 3.425**

77. Yang S., Perna N., Cooksey D., Okinaka Y., Lindow S., Ibekwe A., Keen N. and **Yang C.-H**. 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**

78. Marschner P., Crowley D. and **Yang C.-H.**. 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**

79. Alvey S., **Yang C.-H.**, Buerkert A. and Crowley D.. 2003. Cereal/legume rotation effects on rhizosphere bacterial community structure in West African soils. Biol Fert Soils 37:73-82. **IF- 2.319**

80. Yang C.-H., Gavilanes-Ruiz M., Okinaka Y., Vedel R., Bethuy I., Boccara M., Chen J., Perna N., and Keen N.. 2002. *hrp* genes of *Erwinia chrysanthemi* 3937 are important virulence factors. Mol Plant-Microbe Interact. 15:472-480. **IF- 4.431**

81. Okinaka Y., **Yang C.-H.**, Perna N. and Keen N.. 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**

82. Okinaka Y., **Yang C.-H.**, Herman E., Kinney A. and Keen N.. 2002. The P34 elicitor interacts with a soybean photorespiration enzyme, NADH-dependent hydroxypyruvate reductase. Mol Plant-Microbe Interact. 15:1213-1218. **IF- 4.431**

83. Luepromchai E., Singer A., **Yang C.-H.** and Crowley D.. 2002. Interactions of earthworms with indigenous and bioaugmented PCB-degrading bacteria. FEMS Microbial Ecol. 41: 191-197. **IF- 3.408**

84. Ibekwe A., Kennedy A., Frohne P., Papiernik S., **Yang C.-H.** and Crowley D.. 2002. Microbial diversity along a transect of agronomic zones. FEMS Microbial Ecol. 39:183-191. **IF- 3.408**

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93. Yang C.-H., Azad H. and Cooksey D.. 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**

94. Yang C.-H., Menge J., and Cooksey D.. 1994. Mutation affecting hyphal colonization and pyoverdine production in pseudomonads toward *Phytophthora parasitica*. Appl Environ Microbiol. 60:473-481. **IF- 3.829**

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Books and Monographs.

Zeng Q. and **Yang C.-H.**. 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 Yang S.-H.. 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, Gilbert E., Singer A., Newcombe D. and **Yang C.-H.**. 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:

Sundin G. , Castiblanco L., Yuan X., Zeng Q. and **Yang C.-H.**. 2016. Bacterial disease management: challenges, experience, innovation and future prospects. Mol Plant Pathol. 17.9: 1506-1518.

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

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

Invited seminars at professional meetings (since 2013):

Invited Keynote speaker "Antibiotic alternatives for disease control" Wisconsin Apple Field Day. July 11, 2019, Chippewa Falls, Wisconsin

Invited seminar "Anti-virulence approaches to combat bacterial diseases", International Symposium on Fire Blight of Rosaceous Plants June 17-21, Traverse City, Michigan.

Invited seminar "Systematic analysis of cyclic di-GMP signaling enzymes and their role in bacterial virulence" China Agricultural University, May 30_2018

Invited seminar "Systematic analysis of cyclic-di-GMP signaling enzymes reveals multilevel regulation of bacterial behavior", Northeast Forestry University, May 26, 2018

Invited seminar "Multilevel regulation of c-di-GMP signaling on diverse virulence factors of a bacterial pathogen" Chinese Academy of Agricultural Sciences, May 24, 2018.

Invited seminar " Development of virulence-specific antimicrobials to combat bacterial diseases" National Cheng Kung University, Jan 22_2018

Invited seminar "Systematic analysis of cyclic-di-GMP signaling enzymes reveals novel pathways to modulate bacterial virulence" Academia Sinica, Jan 5, 2018

Invited semiar "Development of virulence-specific antimicrobials to combat bacteria-mediated disease" National Taiwan University, Dec 15, 2017

Invited seminar "Development of anti-virulence antimicrobials to combat bacterial diseases" National Chung Hsing University, September 28, 2017

Invited seminar "Development of virulence-specific therapeutics and their implication on disease management" TACTRI, Taichung, Taiwan, Nov 22, 2016.

Invited seminar "Discovery of anti-virulence compounds that act as type III secretion system

inhibitors on bacterial Pathogens" Jiangsu Academy of Agricultural Sciences. Jiangsu, China, Nov 17, 2016

Invited seminar "Small molecules, big impact: cross-talk between cyclic-di-GMP signaling and global regulators and their impact on bacterial virulence and behaviors" Nanjing Agriculture University, Nanjing, China, Nov 16, 2016

Invited seminar "Discovery of anti-virulence compounds that act as type III secretion system inhibitors on bacterial Pathogens" China Agriculture University, Beijing, China, Nov 14, 2016

Invited seminar "Regulatory effect of type III secretion system inhibitors and inducers on *Erwinia amylovora*" Academia Sinica, Taipei, Taiwan, Nov 23 and 24, 2016,

Invited seminar "Integrated study of c-di-GMP signal that feeds into the regulatory system of the bacterial cells" China Agricultural University, Beijing, China, January 14 to 15, 2016.

Keynote Speaker, "Cross-talk between regulatory small RNA, cyclic-di-GMP signaling, and flagellar regulator for virulence and bacterial behaviours" Symposium "Theory and Technology Innovation for Control of Crop Diseases". China Agricultural University, Beijing, China, August 4-6, 2015.

Invited Seminar, "Deciphering the multi-tiered regulatory network that links the flagellar master regulator FlhDC to cyclic-di-GMP signaling and the type III secretion system" National Chung Hsing University, Tiachung, Taiwan, July, 31, 2015.

Invited Seminar, "Cross-talk between regulatory small RNA, cyclic-di-GMP signaling, and flagellar regulator for virulence and bacterial behaviours" Academia Sinica, Taipei, Taiwan, July 28, 2015.

Invited Keynote Speaker and Chair "Small things, big impact: Regulation of virulence factors by c-di-GMP and regulatory small RNA in a bacterial pathogen" 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 10th 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.