

單位：農學院 植物醫學系

教師姓名：黃健瑞

現職：副教授

學歷：2000/06 國立台灣大學植物病蟲害學學士
2006/06 國立台灣大學植物病理與微生物學博士

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簡要經歷：

2006/10~2011/10 國立台灣大學植物病理與微生物學系博士後研究員

2011/11~2014/12 比利時根特大學植物保護學系博士後研究員

2015/02~2018/07 國立嘉義大學植物醫學系助理教授

2018/08~ 至今 國立嘉義大學植物醫學系副教授

研究興趣（專長）：

植物病害農藥與非農藥防治。

植物病害生物防治。

植物聯繫性細菌。

主要教授課程：

生物防治、植物細菌學、微生物學、蔬菜病害。

黃健瑞助理教授：

(A)期刊論文

1. Pauwelyn, E., **Huang, C. J.**, Ongena, M., Leclere, V., Jacques, P., Bleyaert, P., Budzikiewicz, H., Schafer, M., and Höfte, M. 2013. New linear lipopeptides produced by *Pseudomonas cichorii* SF1-54 are involved in virulence, swarming motility, and biofilm formation. *Mol. Plant-Microbe Interact.* 26:585-598.
2. **Huang, C. J.**, Liu, Y. H., Yang, K. H., and Chen, C. Y. 2012. Physiological response of *Bacillus cereus* C1L-induced systemic resistance in lily against *Botrytis* leaf blight. *Eur. J. Plant Pathol.* 134:1-12.
3. **Huang, C. J.**, Tsai, J. F., Chang, S. Y., Yang, H. P., and Chen, C. Y. 2012. Dimethyl disulfide is an induced systemic resistance-elicitor produced by *Bacillus cereus* C1L. *Pest Manag. Sci.* 68:1306-1310.
4. Yang, K. H., **Huang, C. J.**, Liu, Y. H., and Chen, C. Y. 2011. Efficacy of probenazole for control of southern corn leaf blight. *J. Pestic. Sci.* 36:235-239. Contributed equally to the first author.
5. Liu, Y. H., **Huang, C. J.**, and Chen, C. Y. 2010. Identification and transcriptional analysis of genes involved in *Bacillus cereus*-induced systemic resistance in *Lilium*. *Biol. Plant.* 54:697-702. Contributed equally to the first author.
6. **Huang, C. J.**, Yang, K. H., Liu, Y. H., Lin, Y. J., and Chen, C. Y. 2010. Suppression of southern corn leaf blight by a plant growth promoting rhizobacterium *Bacillus cereus* C1L. *Ann. Appl. Biol.* 157:45-53.
7. **Huang, C. J.**, Guo, S. H., Chung, S. C., Lin, Y. J., and Chen, C. Y. 2009. Analysis of the involvement of chitin-binding domain of ChiCW in antifungal activity, and engineering a novel chimeric chitinase with high enzyme and antifungal activities. *J. Microbiol. Biotechnol.* 19:1169-1175.

8. Liu, Y. H., **Huang, C. J.** and Chen, C. Y. 2008. Evidence of induced systemic resistance against *Botrytis elliptica* in lily. *Phytopathology* 98:830-836.
9. **Huang, C. J.** and Chen, C. Y. 2008. Synergistic interactions between chitinase ChiCW and fungicides against plant fungal pathogens. *J. Microbiol. Biotechnol.* 18:784-787.
10. Liu, Y. H., **Huang, C. J.**, Yang, K. H., and Chen, C. Y. 2008. Effect of hydrogen peroxide on infection of lily by *Botrytis elliptica*. *Plant Pathol. Bull.* 17:307-314.
11. Liu, Y. H., **Huang, C. J.** and Chen, C. Y. 2007. *Bacillus cereus* induces systemic resistance against *Botrytis elliptica* in lily. *Chin. Agri. Sci. Bull.* 23:368-370.
12. **Huang, C. J.** and Chen, C. Y. 2006. Functions of the C-terminal region of chitinase ChiCW from *Bacillus cereus* 28-9 in substrate-binding and hydrolysis of chitin. *J. Microbiol. Biotechnol.* 16:1897-1903.
13. **Huang, C. J.** and Chen, C. Y. 2005. High-level expression and characterization of two chitinases, ChiCH and ChiCW, of *Bacillus cereus* 28-9 in *Escherichia coli*. *Biochem. Biophys. Res. Commun.* 327:8-17.
14. **Huang, C. J.**, Wang, T. K., Chung, S. C., and Chen, C. Y. 2005. Identification of an antifungal chitinase from a potential biocontrol agent, *Bacillus cereus* 28-9. *J. Biochem. Mol. Biol.* 38:82-88.
15. **Huang, C. J.** and Chen, C. Y. 2004. Gene cloning and biochemical characterization of chitinase CH from *Bacillus cereus* 28-9. *Ann. Microbiol.* 54: 289-297.
16. Chen, C. T., **Huang, C. J.**, Wang, Y. H., and Chen, C. Y. 2004. Two-step purification of *Bacillus circulans* chitinase A1 expressed in *Escherichia coli* periplasm. *Protein Expr. Purif.* 37: 27-31.
17. Chen, C. Y., Wang, Y. H., and **Huang, C. J.** 2004. Enhancement of the antifungal activity of *Bacillus subtilis* F29-3 by the chitinase encoded by *Bacillus circulans chiA* gene. *Can. J. Microbiol.* 50: 451-454.

(B)研討會論文

1. Olorunleke, F. E., Geudens, N., Onyeka, T. J., Bertier, L., Kieu, N. P., **Huang, C. J.**, Ongena, M., Martins, J. C., and Höfte, M. 2014. Diversity and bioactivity of biosurfactant-producing *Pseudomonads* isolated from cocoyam rhizosphere in Nigeria and Cameroon. International Symposium on Crop Protection. Ghent, Belgium.
2. Olorunleke, F. E., Onyeka, T. J., **Huang, C. J.**, Kieu, N. P., and Höfte, M. 2013. Phylogeny and characterisation of biocontrol *Pseudomonas* isolates associated with cocoyams in Nigeria. International Symposium on Crop Protection. Ghent, Belgium. Poster
3. **Huang, C. J.**, De Maeyer, K., and Höfte, M. 2012. Effects of phenazines on *Pseudomonas* sp. CMR12a cell physiology under microaerobic conditions. XII Meeting of IOBC-WPRS Working Group "Biological control of fungal and bacterial plant pathogens". Reims, France. Poster
4. **Huang, C. J.**, Yang, H. P., Tsai, C. F., and Chen, C. Y. 2011. Search for the volatiles of *Bacillus cereus* C1L involved in the induction of systemic disease resistance and plant growth promotion. *Phytopathology* 101:S76. Poster
5. **Huang, C. J.** and Chen C. Y. 2011. Induced systemic resistance and plant growth promotion by *Bacillus cereus*. Cross-Strait Symposium on Plant Pathology 2011. Taipei, Taiwan, ROC. Oral presentation
6. **Huang, C. J.**, Tsai, J. F., Yang, H. P., and Chen, C. Y. 2011. Volatiles of *Bacillus cereus* C1L elicits systemic resistance in plants. *Plant Pathol. Bull.* (Abstr.) Oral presentation

7. **Huang, C. J.**, Yang, H. P., Chang, H. D., Tsai, C. F., and Chen, C. Y. 2010. Plant growth promotion and disease suppression by a biocontrol strain of *Bacillus cereus*. The Canadian Phytopathological Society Annual Meeting.
8. **Huang, C. J.**, Yang, K. H., Liu, Y. H., and Chen, C. Y. 2010. Efficacy of probenazole in inducing systemic resistance of maize against southern corn leaf blight. Plant Pathol. Bull. (Abstr.) Oral presentation
9. **Huang, C. J.**, Liu, Y. H., and Chen, C. Y. 2009. Application of *Bacillus cereus* C1L to reduce the use of fungicide in plant disease control. Plant Pathol. Bull. (Abstr.) Oral presentation
10. Liu, Y. H., **Huang, C. J.**, Lin, Y. J., and Chen, C. Y. 2008. Activation of plant immunity for control of plant diseases. Symposium on plant disease management in the era of energy-saving and carbon reduction. Taichung, Taiwan, ROC.
11. Liu, Y. H., **Huang, C. J.**, and Chen, C. Y. 2008. Identification of genes involved in *Botrytis cereus*-induced systemic resistance in *Lilium formosanum* and the transcriptional analysis of gene expression. International Conference on Biotic Plant Interactions. Brisbane, Australia.
12. Lin, Y. J., **Huang, C. J.**, Liu, Y. H., and Chen, C. Y. 2008. Colonization of *Bacillus cereus* strain C1L on the roots of *Lilium formosanum*. Plant Pathol. Bull. (Abstr.)
13. Liu, Y. H., **Huang, C. J.** and Chen, C. Y. 2007. *Bacillus cereus* induces systemic resistance against *Botrytis elliptica* in lily. 90th annual meeting of Chinese Association of Agricultural Science Society. Beijing, China. Invited speaker
14. Huang, R. Y., **Huang, C. J.**, and Chen, C. Y. 2007. Transposon mutagenesis in antagonistic bacterium *Bacillus cereus* C1L and the cloning of genes related to antifungal activity. 12th Symposium on Bacteria. Hsinchu. (Abstr.)
15. Liu, Y. H., **Huang, C. J.**, and Chen, C. Y. 2007. Evidence of *Bacillus cereus* induces systemic resistance against *Botrytis elliptica* in lily. XIII International Congress on Molecular Plant-Microbe Interactions. Sorrento, Italy. (Abstr.)
16. **Huang, C. J.** and Chen, C. Y. 2006. A chitinase-overproducing strain of *E. coli* constructed for characterization of ChiCW from *Bacillus cereus* 28-9. 14th International Microbial Genomics Conference. Lake Arrowhead, California. (Abstr.)
17. **Huang, C. J.**, Wang, T. K., Chung, S. C., and Chen, C. Y. 2003. Chitinase system and its involvement in the antifungal activity of *Bacillus cereus* 28-9. 11th International Congress on Molecular Plant-Microbe Interactions. St.-Petersburg, Russia. Invited speaker
18. **Huang, C. J.** and Chen, C. Y. 2001. Characterization of chitinases produced by an antagonistic bacterium, *Bacillus cereus* 28-9. Plant Pathol. Bull. 10:214. (Abstr.) Oral presentation

(C)其他著作

1. **Huang, C. J.**, De Maeyer, K., Hofte, M. 2013. Effects of phenazines on *Pseudomonas* sp. CMR12a cell physiology under microaerobic conditions. IOBC-WPRS Bull. 86:247-248.
2. Liu, Y. H., **Huang, C. J.**, Lin, Y. J., and Chen, C. Y. 2008. Activation of plant immunity for control of plant diseases. Proceedings of symposium on plant disease management in the era of energy-saving and carbon reduction. pp. 193-202. Taiwan Agricultural Research Institute and Taiwan Phytopathological Society.

3. **Huang, C. J.** 2006. Chitinase system of antagonistic *Bacillus cereus* 28-9. Ph.D. dissertation. National Taiwan University.
4. **Huang, C. J.**, Wang, T. K., Chung, S. C., and Chen, C. Y. 2004. Chitinase system and its involvement in the antifungal activity of *Bacillus cereus* 28-9. *Biology of Plant- Microbe Interactions*. pp. 312-314. IS-MPMI.

(D)技術報告及其他

1. **黃健瑞**、陳昭瑩。2004。植物的醫病良方-幾丁質分解性拮抗細菌。科學發展 391:28-33。