

HUI CHEN, Ph.D.

Department of Agronomy, Kansas State University (KSU)
 2004 Throckmorton Plant Sciences Center, 1712 Claflin Road, Manhattan, KS 66506, USA
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EDUCATION

Ph.D. Plant Molecular Biology and Virology, Ehime University, Japan	2010
M.S. Plant Molecular Biology and Virology, Ehime University, Japan	2007
M.S. Crop Genetics and Breeding, Hainan University (former South China University of Tropical Agriculture), China	1998
B.S. Tropical Agriculture, Hainan University, China	1995

PROFESSIONAL EXPERIENCE

Research Assistant Professor (Faculty), Department of Agronomy, KSU, Manhattan KS, USA	Jan 2019-Present
<ul style="list-style-type: none"> ●Exploring novel genetic transformation and genome editing strategies in wheat. ●Development and optimization of a <i>Barley stripe mosaic virus</i> (BSMV)-mediated gene editing system to improve FHB resistance in wheat. ●Identification of candidate proteins that can interact with Fhb1 and PHS. 	
Research Associate, Department of Agronomy, KSU, Manhattan KS, USA	Jan 2016-Jan 2019
<ul style="list-style-type: none"> ●Application of CRISPR technologies for genome editing in wheat. ●Understanding the molecular and genetic mechanisms of wheat resistance to diseases (Fusarium Head Blight, FHB and Leaf rust, Lr) and Pre-harvest sprouting (PHS). 	
Post-doctoral Fellow, University of Western Ontario, London, Canada	Dec 2014-Dec 2015
<ul style="list-style-type: none"> ●Developing novel soybean lines with resistance to <i>Soybean Mosaic Virus</i> (SMV) through TILLING and next-generation sequencing. 	
NSERC Research Fellow, Agriculture and Agri-Food Canada, London, Canada	Dec 2011-Nov 2014
<ul style="list-style-type: none"> ●Investigating the regulatory roles of small RNAs and global transcriptional response to <i>Soybean Mosaic Virus</i> (SMV) infection in soybean using next-generation sequencing. ●Developing novel peach variety with resistant to <i>Plum Pox Virus</i> (PPV) through TILLING and next-generation sequencing. 	
Research Fellow, Faculty of Agriculture, Ehime University, Matsuyama, Japan	Apr 2010-Nov 2011
<ul style="list-style-type: none"> ●Genetic research on Hierarchical interaction between Tobamovirus and L resistance gene. ●Molecular functional analysis of rice genes involved in RNA silencing and antiviral pathway 	
Visiting Scientist, Biotrop Laboratory, CIRAD-CA, Montpellier, France	June 2001-Nov 2001
<ul style="list-style-type: none"> ●Genetic mapping on cv R570 genome using microsatellite markers. 	
Research Scientist and Lab Director, Sugarcane Research Institute, Yunnan Academy of Agricultural Sciences, Kaiyuan, China	July 1998-Sept 2004
<ul style="list-style-type: none"> ●QTL analysis for sugarcane introgression breeding using molecular markers (SSR, AFLP). ●Sugarcane genetic diversity and phylogeny using molecular markers (RAPD). ●Diagnostic tests for exporting and importing sugarcane varieties using serological and molecular techniques (ELISA, RT-PCR). 	

GRANTS, AWARDS AND FELLOWSHIPS/SCHOLARSHIPS

Grants:

- Bai, G. H., **Chen, H.** (Co-PI) (2022-2026), U.S. Wheat and Barley Scab Initiative (USWBSI) Project, “Develop a transgene-free nanoparticle-mediated genome editing system for gene functional characterization and breeding for FHB resistance in wheat”, \$240,000 (Pending)
- Bai, G. H., **Chen, H.** (Co-PI) and Tian B. (Co-PI) (2020-2021), U.S. Wheat and Barley Scab Initiative (USWBSI) Project, “Function analysis of Fhb1 using *BSMV*-mediated CRISPR/Cas9 gene editing system”, \$100,000
- Bai, G. H. and **Chen, H.** (Co-PI) (2018-2019), U.S. Wheat and Barley Scab Initiative (USWBSI) Project, “*Barley Stripe Mosaic Virus*-mediated CRISPR/Cas9 genome editing for FHB resistance improvement”, \$60,000
- Nishiguchi, M. and **Chen, H.** (Co-PI) (2012-2016), Promotion Program for Agriculture, Forestry, Fisheries and Food Industry, the Ministry of Education, Culture, Sports, Science and Technology of Japan, “Analysis of rice genes involved in RNA silencing and response to virus”, JPY ¥ 4,290,000 (USD \$38,610)
- **Chen, H.** (PI) (2003-2006), Yunnan Natural Science Foundation, “Molecular breeding and marker-assisted selection using sugarcane germplasm”, CNY ¥ 60,000 (USD \$ 9,369)
- Fan, Y. H. and **Chen, H.** (Co-PI) (2002-2005), Key Project of Yunnan Provincial International Collaboration, “Developing diagnostics tools for quarantine disease in exotic sugarcane varieties”, CNY ¥ 400,000 (USD \$62,460)

Awards:

- 32nd Annual Meeting of American Society for Virology, State College, PA, USA, July 20-24, 2013, Travel Award
- 9th International Plant Molecular Biology Congress, St. Louis, MO, USA, October 25-30, 2009, Travel Award
- 4th International Crop Science Congress, Brisbane, Australia, September 26-October 1, 2004, Travel Award

Fellowships/Scholarships:

- Natural Sciences and Engineering Research Council of Canada (NSERC), London, Canada, December 2011-November 2014, Agriculture and Agri-Food Canada (AAFC) Visiting Fellowship
- Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan, M.S. and Ph.D. study, Ehime University, Matsuyama, Japan, October 2004 - March 2010, Japanese Government Scholarship
- International cooperation project (PRA) between China government and France government, Molecular Markers Training on Sugarcane Genetic Mapping, CIRAD, Montpellier, France, June-November 2001, France Government Fellowship

PROFESSIONAL SERVICE

Journal Reviewer Board Member: *Applied Sciences; Genes*

Journal Reviewer: *Plant Molecular Pathology, Scientific Reports, Molecular Plant-Microbe Interactions, PeerJ, Plant Protection Science, In Vitro Cellular & Developmental Biology-Plant, Ecotoxicology, Toxins; MDPI: Agronomy, Applied Sciences, Genes, Plants, Cells, Viruses, Non-Coding RNA, International Journal of Molecular Sciences*

PROFESSIONAL MEMBERSHIP

- The Molecular Biology Society of Japan (MBSJ)
- The Phytopathological Society of Japan
- Canadian Phytopathological Society
- The American Society for Virology
- American Phytopathological Society
- Sigma Xi

ACADEMIC PUBLICATIONS (<https://scholar.google.com/citations?user=QGxBC6AAAAAJ&hl=en>)**Peer-Reviewed Journals:** (*corresponding author)

1. **Chen, H.**, Su, Z. Q., Tian, B., Liu, Y., Pang, Y. H., Kavetskyi, V., Trick, H. and Bai, G.H. (2021) Development and optimization of a Barley stripe mosaic virus (BSMV)-mediated gene editing system to improve Fusarium head blight (FHB) resistance in wheat. *Plant Biotechnol. J.* (Under review).
2. Lin, G. F., **Chen, H.**, Tian, B., Sehgal, S. S., Xie, J. Z., Juliana, P., Singh, N., Rawat, N., Shrestha, S., Wilson, D., Shult, H., Tiwari, V., Singh, R. V., Guttieri, M. J., Trick, H., Poland, J., Bowden, R., Bai, G. H., Gill B., and Liu, S. Z. (2020) Cloning of the Broadly Effective Wheat Leaf Rust Resistance 1 Gene *Lr42* Transferred from *Aegilops tauschii*. *Nature Communications* (Revision).
3. Liu, Y., **Chen, H.**, Li, C.X., Zhang, L. R., Shao, M. Q., Pan, Y. H., Xu, X.Y. and Bai, G. H. (2021) Development of diagnostic markers for a wheat leaf rust resistance gene *Lr42* using RNA-sequencing. *The Crop Journal*, <https://doi.org/10.1016/j.cj.2021.02.012>.
4. **Chen, H.***, Ino, M., Shimono, M., Wagh, S.G., Kobayashi, K., Yaeno, T., Yamaoka, N., Bai, G. and Nishiguchi, M. (2020) A single amino acid substitution in the intervening region of 129K protein of *cucumber green mottle mosaic virus* resulted in attenuated symptoms. *Phytopathology*, 110(1): 146-152.
5. Nishiguchi *, M., Ali, E.M., **Chen, H.**, Ishikawa, M. and Kobayashi, K. (2019) Resistance Breeding Through RNA Silencing of Host Factors Involved in Virus Replication. In *Antiviral Resistance in Plants* (pp. 247-259). Humana, New York, NY.
6. Su, Z. Q., Bernardo. A., Tian, B., **Chen, H.**, Wang, S., Ma, H. X., Cai, S. B., Liu, D. T., Zhang, D. D., Li, T., Trick, H., Amand, P. S., Yu, J. M., Zhang, Z. Y. and Bai, G. H.* (2019) A Deletion Mutation in *TaHRC* Confers *Fhb1* Resistance to Fusarium Head Blight in Wheat. *Nature Genetics*, doi: 10.1038/s41588-019-0425-8.
7. Tran, H. H., Chen, B., **Chen, H.**, Menassa, R., Hao, X. M., Bernards, M., Norman P.A. Hüner, N. P. A. and Wang, A. M.* (2019) Development of a *cucumber green mottle mosaic virus*-based expression vector for the production of neutralizing epitopes on the surface of viral particles in cucumber. *Journal of Virological Methods*, 269, pp.18-25.
8. Wu, G. W., Cui, X. Y., **Chen, H.**, Renaud, J. B., Yu, K. F., Chen, X. and Wang, A. M.* (2018) Dynamin-like proteins of endocytosis in plants are co-opted by potyviruses to enhance virus infection. *Journal of Virology*, 92(23), e01320-18.
9. Shao, M. Q., Bai, G. H., Rife, T., Poland, J., Lin, M., Liu, S. B., **Chen, H.**, Kumssa, T., Allan Fritz, A., Trick, H., Li, Y. and Zhang, G. R.* (2018) QTL mapping of pre-harvest sprouting resistance in a white wheat cultivar Danby. *Theoretical and Applied Genetics* 1-15.
10. **Chen, H.**, Adam Arsovski, A., Yu, K. and Wang, A. M.* (2017) Deep sequencing leads to the identification of eukaryotic translation initiation factor 5A as a key element in Rsv1-mediated lethal systemic hypersensitive response to Soybean mosaic virus infection in soybean. *Molecular Plant Pathology*, 18: 391–404.
11. **Chen, H.**, Arsovski, A. A., Yu, K., & Wang, A. M.* (2016) Genome-wide investigation using sRNA-seq, degradome-seq and transcriptome-seq reveals regulatory networks of microRNAs and their target genes in soybean during Soybean mosaic virus infection. *PLOS ONE*, 11(3), e0150582.
12. Zhang, L., **Chen, H.**, Brandizzi, F., Verchot, J., & Wang, A.* (2015) The UPR Branch IRE1-bZIP60 in Plants Plays an Essential Role in Viral Infection and Is Complementary to the Only UPR Pathway in Yeast. *PLoS Genetics*, 11(4), e1005164.
13. **Chen, H.**, Zhang, L., Yu, K., & Wang, A.* (2015). Pathogenesis of Soybean mosaic virus in soybean carrying Rsv1 gene is associated with miRNA and siRNA pathways, and breakdown of AGO1 homeostasis. *Virology*, 476, 395-404.
14. **Chen, H.***, Kobayashi, K., Miyao, A., Hirochika, H., Yamaoka, N. and Nishiguchi, M.* (2013) Both *OsRecQ1* and *OsRDRI* Are Required for the Production of Small RNA in Response to DNA-Damage in Rice. *PLOS ONE*, 8(1): e55252.

15. **Chen, H.**, Tamai, A., Mori, M., Ugaki, M., Tanaka, Y., Samadder, P.P., Miyao, A., Miyao, A., Hirochika, H., Yamaoka, N. and Nishiguchi, M. (2010) Analysis of Rice *RNA-dependent RNA Polymerase 1 (OsRDRI)* in virus mediated RNA silencing after particle bombardment. *Journal of General Plant Pathology*, 76 (2): 152-160.
16. **Chen, H.**, Samadder, P. P., Tanaka, Y., Ohira, T., Okuizumi, H., Yamaoka, N., Miyao, A., Hirochika, H., Ohira, T., Tsuchimoto, S., Ohtsubo, H. and Nishiguchi, M. (2008) OsRecQ1, a QDE-3 homologue in rice, is required for RNA silencing induced by particle bombardment for inverted repeat DNA, but not for double-stranded RNA. *The Plant Journal*, 56: 274–286.
17. Wang, L.P., Ma, L., Xia, H.M., Lu, X., Cai, Q., Fang, Y.H., **Chen, H.** and Liu, X.L. (2006) Hybrid utilization of *Saccharum spontaneum* L. *Sugar Crops of China*, (1): 1-4.
18. **Chen, H.***, James, A., Fan, Y.H., Huang, Y.K. and Li, W.F. (2005) The primary report on important diseases detection for exotic sugarcane varieties by molecular and serology technique. *Sugar Crops of China*, (1): 29-30.
19. **Chen, H.***, Fan, Y.H. and D'Hont, A. (2004) The research progress of sugarcane molecular biotechnology in France. *Sugarcane*, 11(1): 53-57.
20. **Chen, H.***, Fan, Y.H. and Cai, Q. (2004) RAPD molecular marker technology and its application in sugarcane breeding. *Sugar Crops of China*, (1): 46-48.
21. **Chen, H.***, Fan, Y.H. (2003) The molecular detection of sugarcane genetic diversity. *Molecular Plant Breeding*, 1(6): 713-720.
22. Rossi, M. P., Araujo, G., Paulet, F., Garsmeur, O. V., Dias, M., **Chen, H.**, Van Sluys, M.-A. and D'Hont, A. (2003) Genomic distribution and characterization of EST derived resistance gene analogs (RGAs) in sugarcane. *Molecular Genetics and Genomics*, 269(3): 406-419.
23. Wang, L.P., Fang, Y.H., Cai, Q., Ma, L., Xia, H.M., and **Chen, H.** (2003) Advances in crossing utilization of sugarcane germplasm. *Sugarcane*, 10(3): 17-23.
24. **Chen, H.**, Fan, Y.H., Cai, Q. and Zhang, Y.P. (2003) The phylogenetic relationships of *Saccharum* and related species inferred from sequence analysis of the nrDNA ITS regions. *Acta Agronomica Sinica*, 29(3): 379-385.
25. Wen, J.C., Cai, Q., Fang, Y.H., Zhang, M., and **Chen, H.** (2001) Studies on the Chromosome Numbers of *Saccharum Spontaneum* and Related Plants-*Sclerostachya*, *Narenga* in China. *Sugarcane and Canesugar*, (3): 12-15.
26. Fan, Y.H., **Chen, H.**, Shi, X.W., Zhang, M. and Zhang, Y.P. (2001) RAPD Analyses of *Saccharum Spontaneum* L. from Different Ecospecific Colony in Yunnan. *Acta Botanica Yunnanica*, 23(3): 298-308.
27. **Chen, H.**, Fan, Y.H., Shi, X.W., Zhang, M. and Zhang, Y.P. (2001) Research on genetic diversity and systemic evolution in *Saccharum spontaneum* L. *Acta Agronomica Sinica*, 26(2): 645-652.
28. **Chen, H. and** Zheng, C.M. (1999) Detection of physiological drought resistance for rice hybrids (paddy× upland rice) and analysis of their genetic parameters. *Chinese Journal of Tropical Crops*, 20(3): 73-82.
29. **Chen, H. ***, Bai, J.X, Zheng, C.M. and Huang, D.Y. (1999) Introduction of Rice Germplasm Resources Database Management System in Hainan. *Chinese Journal of Tropical Agriculture*, (6): 96-100.
30. Zheng, C.M., **Chen, H.** and Huang, D.Y. (1998) Affinity and hybridization of Shanlan upland rice with common rice. *Chinese Journal of Tropical Crops*, 19(2): 74-81.
31. Zheng, C.M. and **Chen, H.** (1997) Agronomic traits and physiological characters of drought resistance in the Shanlan upland rice. *Chinese Journal of Tropical Crops*, 18(2): 85-91.
32. Zheng, C.M., **Chen, H.** and Yao, S.Y. (1996) Genetic basis of Shanlan upland rice II. karyotype and characteristics of heterochromatin. *Chinese Journal of Tropical Crops*, 17(1):67-74.

Conference Presentations and Published Abstracts:

1. Hao G., Naumann, T., **Chen, H.**, Bai, G., Tiley, H., McCormick, S., Tian, B., Tick, H., Kim, H. and Proctor, R. (2021) Host-induced silencing of a *Fusarium graminearum* effector enhances wheat resistance to Fusarium Head Blight. *Plant Biology 2021 Worldwide Summit (Virtual)*, July 19-23, 2021

2. **Chen, H.**, Su, Z. Q., Hao, G. X. and Bai, G. H. Functional characterization of *TaHRC* in regulating FHB resistance in wheat. *Proceedings of the 2020 National Fusarium Head Blight Forum (Virtual)*. USA, Dec. 7-11, 2020 (Invited talk).
3. **Chen, H.**, Tian, B., Liu, Y., Trick, H. and Bai, G. H. Development of An Efficient Barley Stripe Mosaic Virus-mediated CRISPR/Cas9 System for Gene Editing in Wheat. *2020 World Congress on In Vitro Biology (Virtual)*. San Diego, CA, USA, Jun 6-10, 2020.
4. Tian, B., **Chen, H.**, Bai, G. H. and Trick, H. Plant Transformation and Genome Editing Systems for Hexaploid Wheat. *2020 World Congress on In Vitro Biology (Virtual)*. San Diego, CA, USA, Jun 6-10, 2020.
5. **Chen, H.**, Su, Z. Q., Tian, B., Trick, H. and Bai, G. H. CRISPR/Cas9 editing for FHB resistance. *USWBSI Fusarium Focus*, P2, Volume 19, Issue 1, Winter 2019 (https://scabusa.org/pdfs/fus-focus_newsletter_v19i1_3-2019.pdf).
6. Chen, H., Bai, G., Kobayashi, K., Yaeno, T. and Nishiguchi, M. (2019) Analysis of Attenuated Strain of *Cucumber Green Mottle Mosaic Virus*: RNA Silencing Suppression Activity of 129K Replicase. *Japanese Journal of Phytopathology* 86 (3): 215.
7. **Chen, H.**, Zhao, J. X., Xu, Y. Z. and Bai, G. H. *LATE ELONGATED HYPOCOTYL 1*, a circadian clock gene homolog, coordinating with *TaPHS1* regulates pre-harvest sprouting resistance in wheat. *Plant and Animal Genome XXVII Conference (PAG)*, San Diego, CA, USA, Jan 11-16, 2019 (Invited talk).
8. **Chen, H.**, Su, Z. Q., Tian, B., Trick, H. and Bai, G. H. CRISPR/Cas9 Genome Editing Technology for FHB Resistance Improvement in Wheat. *Proceedings of the 2018 National Fusarium Head Blight Forum* in St. Louis, MO, USA, Dec. 2-4, 2018 (Invited talk).
9. Tian, B., Chen, Y., Su, Z., **Chen, H.**, Bai, G., & Trick, H. N. (2018). Application of CRISPR/Cas9 Genome Editing System for Hexaploid Wheat. In *IN VITRO CELLULAR & DEVELOPMENTAL BIOLOGY-ANIMAL* (Vol. 54, pp. S47-S47). 233 SPRING ST, NEW YORK, NY 10013 USA: SPRINGER.
10. **Chen, H.**, Tian, B., Trick, H. and Bai, G. H. An Efficient Barley Stripe Mosaic Virus-mediated CRISPR/Cas9 Genome Editing System in Wheat. *5th Plant Genomics and Gene Editing Congress*, Philadelphia, PA, USA, Nov.2-3, 2017.
11. **Chen, H.**, Zhao, J.X., and Bai, G. H. Genome-wide characterization of genes controlling wheat seed dormancy and pre-harvest sprouting using RNA-seq. *Plant and Animal Genome XXV Conference (PAG)*, San Diego, CA, USA, Jan 14-17, 2017.
12. Tran, H. H., **Chen, H.**, Menassa, R., Huner, N. and Wang, A.M. Exploiting *Bean pod mottle virus* as a transient expression system to produce plant-made vaccines against porcine reproductive and respiratory syndrome virus (PRRSV) in soybean leaves. *Canadian Plant Biotech 2016*, Queen's University, Kingston, Canada, June 19-21, 2016.
13. Tran, H. H., **Chen, H.**, Menassa, R., Huner, N. and Wang, A.M. Exploiting *Bean pod mottle virus* as a transient expression system to produce plant-made vaccines against porcine reproductive and respiratory syndrome virus (PRRSV) in soybean leaves. *The 2nd conference of the International Society for Plant Molecular Farming*, Ghent, Belgium, May 25-27, 2016.
14. **Chen, H.**, Andje, A. and Wang, A. M. Genome-wide investigation of sRNA-seq, degradome-seq and transcriptome-seq reveals strain-specific regulation of microRNAs and differential transcriptional response to *Soybean Mosaic Virus* (SMV) infection in soybean. *34th Annual Meeting of American Society for Virology*, University of Western, Ontario, ON, Canada, July 11-15, 2015.
15. Tanaka, T., Wagh, S. G., Alam, M. M., **Chen, H.**, Kobayashi, K., Yaeno, T., Yamaoka, N. and Nishiguchi, M.: Functional Analysis of *OsSGS3*, a Rice Gene Involved in RNA Silencing. *The 100th annual Ceremony and Memorial Symposium of Phytopathological Society of Japan*, Tokyo, Japan, March 28-31, 2015.
16. **Chen, H.** and Wang, A. M. Global investigation of microRNAs involved in soybean innate immune response to different strains of *Soybean Mosaic Virus* (SMV) infection by deep sequencing. *2014 APS-CPS Joint Meeting of Phytopathological Society*, Minneapolis, MN, USA, August 9-13, 2014.

17. Tran, H. H., **Chen, H.**, Wang, H. Y., Menassa, R., Huner, N., Wang, A.M. Developing a *Bean pod mottle virus*-based expression system for the expression of proteins of interest in plants. **33rd Annual Meeting of American Society for Virology**, Fort Collin, Colorado, USA, June 21-25, 2014.
18. **Chen, H.** and Wang, A. M. The *AGO1*-miR168 feedback regulation is involved in *Rsv1*-mediated resistance to *Soybean mosaic virus* in soybean. **32nd Annual Meeting of American Society for Virology**, University of Pennsylvania, State College, PA, USA, July 20-24, 2013.
19. Nishiguchi, M., **Chen, H.**, Kobayashi, K. and Yamaoka, N. Effect of rice RNA-dependent RNA Polymerase 1 (*OsRDR1*) on RNA silencing and small RNA regulation. **XV International Congress of Molecular Plant-Microbe Interactions**, Kyoto, Japan, July 29- August 2, 2012.
20. **Chen, H.**, Kobayashi, K., Miyao, A., Hirochika, H., Yamaoka, N. and Nishiguchi, M. A novel mechanism of regulation to DNA damage response through qiRNA biogenesis in rice: involvement of *OsRecQ1* and *OsRDR1*. **The Annual Meeting of the Biochemistry and Molecular Biology of Japan**, Yokohama, Japan, December 13-16, 2011
21. Nishiguchi, M., **Chen, H.**, Kobayashi, K., and Yamaoka, N. Role of Rice *RNA-dependent RNA Polymerase 1* (*OsRDR1*) in RNA silencing and Antiviral Pathway. **XV International Congress of Virology**, Sapporo, Japan, September 11-16, 2011.
22. Kobayashi, K., Tomita, R., **Chen, H.**, Mizumoto, H., Go Atsumi, G., Kiba, A., Naoto Yamaoka, N., Hikichi, Y., Nishiguchi, M., and Sekine, K. Toward understanding the mechanism for the recognition of *Tobamovirus* coat proteins by L and N⁷ resistance proteins. **XV International Congress of Virology**, Sapporo, Japan, September 11-16, 2011.
23. **Chen, H.**, Kobayashi, K., Yamaoka, N. and Nishiguchi, M. (2011) Analysis of rice genes required for RNA silencing: *RNA-dependent RNA polymerase 1* (*OsRDR1*). **Japanese Journal of Phytopathology** 77 (3): 143.
24. Tomita, R., **Chen, H.**, Sekine, K.-T., Hikichi, Y., Yamaoka, N., Nishiguchi, M. and Kobayashi, K. (2011) Distinct domains of L resistance protein from *Capsicum* plants are involved in the physical interaction with tobamovirus coat proteins. **Japanese Journal of Phytopathology** 77 (3): 429.
25. Nishiguchi, M., **Chen, H.**, Kobayashi, K. and Yamaoka, N. Analysis of rice RNA dependent RNA polymerase gene (*OsRDR1*) in RNA silencing and virus defense. **Symposium of Plant Pathology in Okayama University**, Okayama, Japan, December 8-9, 2010 (invited talk).
26. **Chen, H.**, Kobayashi, K., Yamaoka, N. and Nishiguchi, M. Analysis of rice gene involved in RNA silencing: *OsRecQ1*. **Symposium of Plant Pathology in Okayama University**, Okayama, Japan, December 8-9, 2010.
27. **Chen, H.**, Kobayashi, K., Yamaoka, N. and Nishiguchi, M. Analysis of rice *OsRecQ1* gene involved in RNA silencing. **Symposium of Plant Medical Science at Kochi University**, Kochi, Japan, September 15-16, 2010 (invited speaker).
28. **Chen, H.**, Tamai, A., Mori M., Yamaoka, N., Miyao, A., Hirochika, H., and Nishiguchi, M. (2010) Analysis of Rice *RNA-dependent RNA Polymerase 1* (*OsRDR1*) in virus mediated RNA silencing. **Japanese Journal of Phytopathology** 76 (1), 73-74.
29. **Chen, H.**, Tamai A., Mori, M., Yamaoka, N., Miyao, A, Hirochika, H. and Nishiguchi, M. (Analysis of Rice *RNA-dependent RNA Polymerase 1* (*OsRDR1*) mediated RNA silencing and antiviral pathway. In: **Proceedings of the 9th international Congress of Plant Molecular Biology**, St. Louis, USA, October 25-30, 2009.
30. **Chen, H.**, Samadder, P. P., Tanaka, Y., Mori, M., Yamaoka, N., Miyao, A, Hirochika, H. and Nishiguchi, M. (2009) Analysis of Rice *RNA-dependent RNA Polymerase 1* (*OsRDR1*) mediated RNA silencing Pathway. **Japanese Journal of Phytopathology** 75 (3), 284.
31. Suizu, Y, **Chen, H.**, Miyao, A, Hirochika, H., Yamaoka, N. and Nishiguchi, M. (2009) RNA silencing and virus: Involvement of *OsCMT3*, a Rice Homologue of *Chromomethylase 3*, in RNA silencing. **Japanese Journal of Phytopathology**, 75 (3), 225.
32. **Chen, H.**, Samadder, P. P., Tanaka, Y., Mori, M., Yamaoka, N., Miyao, A, Hirochika, H. and Nishiguchi, M. (2009) Role of Rice *RNA-dependent RNA Polymerase 1* (*OsRDR1*) in RNA silencing and Antiviral Pathway, **Japanese Journal of Phytopathology** 75 (1), 78-79.

33. **Chen, H.**, Samadder, P.P., Tanaka, Y., Ohira, T., Yamaoka, N., Miyao, A., Hirochika, H. and Nishiguchi, M. Role of *OsRecQ1*, *QDE-3* homologue in rice, in RNA silencing by particle bombardment with inverted repeat DNA; an implication of processing inverted repeat DNA to allow for transcription. *The Annual Meeting of the Biochemistry and Molecular Biology of Japan*, Kobe, Japan, December 9-12, 2008.
34. **Chen, H.**, Samadder, P.P., Tanaka, Y., Miyao, A., Hirochika, H., Yamaoka, N. and Nishiguchi, M. (2008) RNA silencing and virus: mutant analysis of rice RNA dependent RNA polymerase gene (*OsRDRI*). *Japanese Journal of Phytopathology* 74 (3), 244.
35. **Chen, H.**, Samadder, P.P., Tanaka, Y., Kusaba, M., Nishimura, M., Miyao, A., Hirochika, H., Yamaoka, N. and Nishiguchi, M. Analysis of gene involved in RNA silencing using *Tos17* insertion mutant lines: *OsRDRI*. *The Spring Meeting of Japan Society of Breeding*, Kawasaki, Japan, March 27-28, 2008.
36. Nishiguchi, M., **Chen, H.**, and Yamaoka, N. (2008) Silencing Suppression of RNA silencing by of *Cucumber green mottle mosaic virus* 129K protein: A comparison between severe and attenuated strains. *Journal of Plant Pathology* 90 (2), 234.
37. **Chen, H.**, Yamaoka, N. and Nishiguchi, M. (2007) Suppression of RNA silencing by 129K protein of *Cucumber green mottle mosaic virus*: comparison between severe and attenuated strains. *Japanese Journal of Phytopathology* 73 (3), 237.
38. **Chen, H.**, Samadder, P.P., Ohira, T., Miyao, A., Hirochika, H., Kusaba, M., Nishimura, M. Ohira, T., Tsuchimoto, S., Ohtsubo, H. and Nishiguchi, M. (2006) Analysis of gene involved in RNA silencing using *Tos17* insertion mutant lines in rice: *QDE-3* homologue. *Breeding Research* 8 (1), 38.
39. Nishiguchi, M., Ino, M., Shimono, M., **Chen, H.**, Beppu, H. and Fujimura, T. (2006) Suppression of RNA silencing by Cucumber green mottle mosaic virus. *Japanese Journal of Phytopathology* 72 (3), 115.
40. Nishiguchi, M., **Chen, H.**, Samadder, P.P., Ohira, T., Kusaba, M., Nishimura, M. Ohira, T., Tsuchimoto, S., Ohtsubo, H., Miyao, A. and Hirochika, H. Analysis of gene involved in RNA silencing using *Tos17* insertion mutant lines: *QDE-3* homologue. In: *Proceedings of the 8th international Congress of Plant Molecular Biology*, Adelaide, Australia, August 20-15, 2006.
41. **Chen, H.**, Yuanhong Fan, Qing Cai and Ya-ping Zhang. Research on Genetic Diversity and Phylogeny of *Saccharum spontaneum* L. in China. In: *Proceedings for the 4th International Crop Science Congress*, Brisbane, Australia, September 26-October 1, 2004.
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PATENT APPLICATIONS

Nishiguchi, M., **Chen, H.** and Yamaoka, N. (2007) Gene silencing inhibition technology. Patent in Japan: 2007-065920.