

# Kun Yan Zhu, Ph.D.

## University Distinguished Professor

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(Updated 01/13/2020)

### I. Education and Training

- 1992- 1994 **Postdoctoral Research Associate** (Specialty: Insect Molecular Toxicology), University of Massachusetts at Amherst, MA
- 1989- 1992 **Ph.D. in Biology** (Specialty: Insect Toxicology), Utah State University, Logan, UT
- 1987- 1989 **M.S. in Biology** (Specialty: Insect Toxicology), Utah State University, Logan, UT
- 1978- 1982 **B.S. in Plant Protection** (Specialty: Entomology), Zhejiang University (formerly Zhejiang Agricultural University), Hangzhou, China

### II. Professional Positions Held

- 2017-Present **University Distinguished Professor**, Kansas State University, Manhattan, KS
- 2007- 2017 **Professor**, Kansas State University
- 2002- 2007 **Associate Professor**, Kansas State University
- 1996- 2002 **Assistant Professor**, Kansas State University
- 1994- 1995 **Research Associate Professor (graduate faculty)**, University of Massachusetts at Amherst, MA
- 1992- 1994 **Postdoctoral Research Associate**, University of Massachusetts at Amherst
- 1987- 1992 **Graduate Research Assistant, Teaching Assistant**, Department of Biology, Utah State University, Logan, UT
- 1985- 1987 **Associate Group Leader**, Teaching and Research Group of Entomology, Department of Plant Protection, Zhejiang Agricultural University, China
- 1982- 1987 **Teaching Assistant (faculty appointment)**, Teaching and Research Group of Entomology, Department of Plant Protection, Zhejiang Agricultural University, China

### III. Professional Membership

- 2001- Present American Association for the Advancement of Science (AAAS, 2012 Fellow)
- 2000- Present Gamma Sigma Delta, Honor Society of Agriculture
- 1998- Present Sigma Xi, Scientific Research Society
- 1998- Present Overseas Chinese Entomologist Association
- 1996- Present American Chemical Society
- 1989- Present Entomological Society of America (ESA, 2014 Fellow)

### IV. Awards and Honors

- 2019 Legacy Contribution Award, North Central Branch of the ESA
- 2017 University Distinguished Professor, Kansas State University
- 2016 College of Agriculture Excellence in Graduate Teaching Award, Kansas State University

- 2014 Commerce Bank and WT Kemper Foundation Distinguished Graduate Faculty Award, Kansas State University
- 2014 Fellow, Entomological Society of America (ESA)
- 2013 Award of Excellence for Multi-State Research Project entitled “W-2045: Agrochemical Impacts on Human and Environmental Health: Mechanisms and Mitigation” as a team member, awarded by Western Association of Agricultural Experiment Station Directors, USA
- 2012 Fellow, American Association for the Advancement of Science (AAAS)
- 2011 Entomology Recognition Award, North Central Branch of the Entomological Society of America
- 2009 C.V. Riley Achievement Award, North Central Branch of the Entomological Society of America
- 2004 Summer Faculty Fellowship awarded by National Research Council/US Environmental Protection Agency
- 2000 USDA Agricultural Research Service Award for Superior Effort in the Area of Technology Transfer on the Area-Wide Corn Rootworm Project
- 2000 Elected to Gamma Sigma Delta, Honor Society of Agriculture
- 1998 Elected to Sigma Xi, Scientific Research Society

## **V. Editor and Editorial Board Member**

- 2015- Present Associate editor, *Pesticide Biochemistry and Physiology*, Elsevier
- 2010- Present Associate editor, *Pest Management Science*, Wiley InterScience
- 2016- 2018 Academic editor, Section of Biochemistry, Molecular Biology and Biophysics, *International Journal of Molecular Sciences*, Basel, Switzerland
- 2013- 2017 Academic editor, *PLoS ONE* (<http://www.plosone.org/>)
- 2001- 2018 Subject editor, *Journal of Economic Entomology*, Entomological Society of America
- 2017-Present Editorial board member, *Journal of Zhejiang University: Agriculture and Life Sciences*, Zhejiang University, Hangzhou, China
- 2013- Present Editorial board member, *Journal of Plant Protection*, Chinese Society of Plant Protection and China Agricultural University
- 2012- Present Editorial board member, *Journal of Integrative Agriculture*, Elsevier B.V.
- 2011- Present Editorial board member, *Pesticide Biochemistry and Physiology*, Elsevier
- 2009- Present Editorial board member, *Archives of Insect Biochemistry and Physiology*, Wiley InterScience
- 2005- Present Editorial board member, *Acta Entomologica Sinica*, Entomological Society of China
- 2001- Present Editorial board member, *Insect Science*, Wiley-Blackwell Publishing
- 2012- 2017 Editorial board member, *Psyche: A Journal of Entomology*, Hindawi Publishing Corporation
- 2011- 2017 Editorial board member, *Scientific Reports*, Nature Publishing Group
- 2016 Guest co-editor, special issue on “*Insecticide Toxicology in China*” published in *Pesticide Biochemistry and Physiology* by Elsevier (vol. 132, pp. 1-132, Sep. 2016, <http://www.sciencedirect.com/science/journal/00483575>)
- 2012 Guest editor, special issue on *Insect RNA Interference* published in *Insect Science* by Wiley-Blackwell Publishing (vol. 20, issue 1, Feb. 2013, <http://onlinelibrary.wiley.com/doi/10.1111/ins.2013.20.issue-1/issuetoc>)

- 2012 Guest editor, special section on *Insect Molecular Toxicology and Chitin Metabolism* published in *Insect Science* by Wiley-Blackwell Publishing (vol. 20, issue 2, Apr. 2013, <http://onlinelibrary.wiley.com/doi/10.1111/ins.2013.20.issue-2/issuetoc>)

## **VI. Symposium/Conference Organizer, Chair and Moderator**

- 2019 Anderson T. D., Swale D. R., Bloomquist J. R., Clark J. M., Zhu K. Y., Sparks T. C. (Organizers), PBT Section Symposium: INsecticide TARgets and Resistance (INSTAR) Summit. Entomology 2019 National Meeting of the Entomological Society of America, St. Louis, MO (Nov. 17-20, 2019).
- 2019 O'Brochta D., Zhu K. Y. (Organizers), Organized Meeting: Physiology, Biochemistry, and Toxicology (PBT) Section Meeting- Networking Session. Entomology 2019 National Meeting of the Entomological Society of America, St. Louis, MO (Nov. 17-20, 2019).
- 2019 Member of the Program Committee for the Entomology 2019 National Meeting of the Entomological Society of America, St. Louis, MO (Nov. 17-20, 2019).
- 2019 Member of the Organizing Committee and Academic Committee member, the Second International Conference on Insect Pest Management, Guiyang, China (July 26-29, 2019).
- 2019 Chair for Section I and Co-chair for Roundtable Discussion at Symposium on Insect RNAi Mechanisms and Physiology, Shanxi University, Taiyuan, China (July 22-25, 2019).
- 2019 Zhang J., Ma E., Zhu K. Y. (Organizers), Symposium on Insect RNAi Mechanisms and Physiology, Shanxi University, Taiyuan, China (July 22-25, 2019).
- 2018 O'Brochta D. A., Siegfried B. D., Zhu K. Y., Jensen P. D. (Organizers), Organized Meeting- Physiology, Biochemistry, and Toxicology (PBT) Section Meeting Networking Session at the 2018 Joint Annual Meeting of the Entomological Society of America and the Entomological Society of Canada, Vancouver, Canada. Nov. 11-14, 2018.
- 2018 Anderson T., Bloomquist J. R., Sparks T. C., Swale D., Zhu K. Y. (Organizers)- Clark J. M. (Organizer and Presiding) and Wing K. D. (Presiding), INsecticide TARgets (INSTAR) Summit- New Targets and Chemistry, the 256<sup>th</sup> American Chemical Society (ACS) National Meeting & Exposition, Boston, MA (Aug. 19-23, 2018)
- 2018 Anderson T., Bloomquist J. R., Clark J. M., Sparks T. C., Swale D. (Organizers)- Zhu K. Y. (Organizer and Presiding) and Moar W. (Presiding), INsecticide TARgets (INSTAR) Summit- Resistance Management, the 256<sup>th</sup> American Chemical Society (ACS) National Meeting & Exposition, Boston, MA (Afternoon, Aug. 19, 2018)
- 2017 Academic Committee Member, the Joint Meeting of the Third International Conference of Insect Genomics and the Sixth International Symposium on Insect Physiology, Biochemistry and Molecular Biology. Hangzhou, China (July 1-4, 2017)
- 2017 Vice President, Organizing Committee of the Third International Conference of Insect Genomics at the Joint Meeting of the Third International Conference of Insect Genomics and the Sixth International Symposium on Insect Physiology, Biochemistry and Molecular Biology. Hangzhou, China (July 1-4, 2017)
- 2017 Co-organizer, the Second International Symposium on Insect Molecular Toxicology and Chitin Metabolism. Taiyuan, China (June 27-30, 2017).
- 2017 Section Chair, the Second International Symposium on Insect Molecular Toxicology and Chitin Metabolism. Taiyuan, China (June 27-30, 2017)
- 2016 Zhu K. Y., Pailli S. R., Zhang J. (Organizers), Symposium on *Mechanisms Affecting the Efficiency of RNA Interference in Insects* for the XXV International Congress of Entomology held in Orlando, FL (Sep. 25-30, 2016)

- 2016 Co-moderator, *RNAi and Gene Expression Control in Insects: Pest Management* (contributed papers) for the XXV International Congress of Entomology held in Orlando, FL (Sep. 25-30, 2016)
- 2015 Co-moderator, 10-minute papers in the PBT Section: *Chemical Ecology, Behavior Physiology and Biotic Interaction*, the 63rd National Annual Meeting of the Entomological Society of America, Minneapolis, MN (Nov. 15-18, 2015)
- 2014 Co-moderator, Section 3, Natural Products and New Therapeutics. Yangling International Agri-Science Forum. Yangling, Shaanxi Province, China (Nov. 5-7, 2015)
- 2014 Vice Chair of the Academic Committee, the First International Symposium on Insecticide Toxicology, Guangzhou, China (Aug. 5-7, 2014)
- 2013 Chair of Branch Session III (Insect Molecular Toxicology/Insect Molecular Pharmacology) at the 4th International Conference of Insect Physiology, Biochemistry and Molecular Biology (IPMB 2013), Nanjing, China (June 15-19, 2013)
- 2013 Organizing Committee member and Academic Committee member, the Fourth International Conference of Insect Physiology, Biochemistry and Molecular Biology, Nanjing, China (June 15-19, 2013)
- 2012 Co-moderator, 10-minute papers in the PBT Section: *RNAi and Immunology*, the 60<sup>th</sup> National Annual Meeting of the Entomological Society of America, Knoxville, TN (Nov. 11-14, 2012)
- 2012 Co-organizer and co-moderator, Physiology, Biochemistry, and Toxicology (PBT) Section Symposium: *RNAi: The Power, The Promise and The Frustration*, the 60<sup>th</sup> National Annual Meeting of the Entomological Society of America, Knoxville, TN (Nov. 11-14, 2012)
- 2012 International Organizing Committee member, the Second International Symposium on Insect Midgut Biology, Guangzhou, China (Sep. 24-28, 2012)
- 2012 Symposium moderator, *Research Progress and Exchange of Project "973"*, the Institute of Zoology, Chinese Academy of Sciences, and Institute of Applied Biology, Shanxi University, Taiyuan, Shanxi, China (June 15-19, 2012)
- 2011 Academic Committee member, the Third International Symposium on Insect Physiology, Biochemistry and Molecular Biology, Shanghai, China (July 2-5, 2011)
- 2011 Co-organizer, Symposium on Insect Molecular Toxicology and Chitin Metabolism, Shanxi University, Taiyuan, China (June 26-28, 2011)
- 2010 Co-organizer, Member Symposium: Overseas Chinese Entomologists Association (OCEA): *Opportunities and Challenges of Globalization in Entomology*, the 58<sup>th</sup> National Annual Meeting of the Entomological Society of America, San Diego, CA (Dec. 12-15, 2010)
- 2009 Section chair, the International Insect Science Symposium/Advanced Summer Training Course of Entomological Theories and Methods, Institute of Zoology, Beijing, China (July 25-30, 2009)
- 2009 Section chair, the Second International Symposium on Insect Physiology, Biochemistry and Molecular Biology, Chengde, Hebei Province, China (July 19-22, 2009)
- 2009 Co-organizer, Member Symposium: Overseas Chinese Entomologists Association (OCEA): *Looking Into the Future*, the 57<sup>th</sup> National Annual Meeting of the Entomological Society of America, Indianapolis, IN (Dec. 13-16, 2009)

## **VII. Professional Services**

- 2017- Present President (2020), Vice President (2019), Vice President Elect (2018), Section of Insect Physiology, Biochemistry and Physiology, Entomological Society of America

- 2015- 2017     Governing Board Committee on Diversity and Inclusion, Entomological Society of America
- 2015- 2018     Executive Committee, Kansas State University Chapter of Sigma Xi
- 2012- 2015     Entomology Department Executive Committee, Kansas State University
- 2010- Present   NC246 (formerly NC205) Multi-State Regional Research Committee: Ecology and Management of Arthropods in Corn
- 2008- 2010     President (2010), Vice President (2009), and Treasurer (2008), Overseas Chinese Entomologist Association
- 2007- 2011     K-State Ecological Genomics Institute Symposium Committee
- 2006- 2011     K-State Arthropod Genomics Center Competitive Seed Grants Committee (Chair: 2008-2011)
- 2005- 2015     W2045 Multi-State Regional Research Committee: Agrochemical Impacts on Human and Environmental Health: Mechanisms and Mitigation
- 2003- 2008     K-State IPM Mini-Grants Steering Committee
- 2002- 2012     K-State Sarachek Pre-doctoral Fellowship in Molecular Biology Selection Committee
- 2002- 2003     Advisor of Student Organization- Popenoe Entomology Club, Kansas State University

### **XIII. Patent Received**

- 2014           Zhu K. Y., Zhang X., Zhang J., Double-stranded RNA-based nanoparticles for insect gene silencing (U.S. Patent No. 8,841,272 B2)

### **IX. Scholarly Publications**

#### **Refereed Journal Publications**

1. Ramadan G. R. M., Zhu K. Y., Abdelgaleil S. A. M., Shawir M. S., El-bakary A. S., Edde P. A., Phillips T. W. 2020. Ethanedinitrile as a fumigant for the cigarette beetle, *Lasioderma serricornne* (Coleoptera: Anobiidae) and the lesser grain borer, *Rhyzopertha dominica* (Coleoptera: Bostrichidae): toxicity and mode of action. J. Econ. Entomol. (in press, <http://dx.doi.org/10.1093/jee/toz343>).
2. Liu J., Zhang X., Wu H., Ma W., Zhu W., Zhu K. Y., Ma E., Zhang J. 2020. Characteristics and roles of cytochrome b5 in cytochrome P450-mediated oxidative reactions in *Locusta migratoria*. J. Integr. Agr. (in press).
3. Zhu K. Y., Palli S. R. 2020. Mechanisms, applications, and challenges of insect RNA interference. Annu. Rev. Entomol. 65: 293-311 (<https://doi.org/10.1146/annurev-ento-011019-025224>).
4. Liu X., Cooper A. M. W., Yu Z., Silver K., Zhang J., Zhu K. Y. 2019. Progress and prospects of arthropod chitin pathways and structures as targets for pest management. Pestic. Biochem. Physiol. 161: 33-46 (<https://doi.org/10.1016/j.pestbp.2019.08.002>).
5. Anderson T. D., Swale D. R., Bloomquist J. R., Wing K. D., Sparks T. C., Zhu K. Y. 2019. Preface: 2018 INSEcticides & TARgets (INSTAR) summit. Pestic. Biochem. Physiol. 161: 1. (<https://doi.org/10.1016/j.pestbp.2019.09.005>).
6. Yao J., Chen C., Chang J. Wu H., Campbell J. F., Arthur F. H., Zhu K. Y. 2019. Comparative susceptibilities to commonly used insecticides between the red flour beetle (*Tribolium castaneum*) and the confused flour beetle (*T. confusum*). J. Stored Prod. Res. 84: 101524 (<https://doi.org/10.1016/j.jspr.2019.101524>).
7. Zhao X., Gou X., Liu W., Ma E., Moussian B., Li S., Zhu K. Y., Zhang J. 2019. The wing-specific cuticular protein LmACP7 is essential for wing morphogenesis in the migratory locust. Insect Biochem. Mol. Biol. 112: 103206 (<https://doi.org/10.1016/j.ibmb.2019.103206>).
8. Wu L., Jia Q., Zhang X., Zhang X., Liu S., Park Y., Feyereisene R., Zhu K. Y., Ma E., Zhang J., Li S. 2019. *CYP303A1* has a conserved function in adult eclosion in *Locusta migratoria* and

- Drosophila melanogaster*. Insect Biochem. Mol. Biol. 113: 103210 (<https://doi.org/10.1016/j.ibmb.2019.103210>).
9. Liu J., Wu H., Zhang X., Ma W., Zhu W., Silver K., Ma E., Zhang J., Zhu K. Y. 2019. Metabolism of selected model substrates and insecticides by recombinant CYP6FD1 encoded by its gene predominately expressed in the brain of *Locusta migratoria*. Pestic. Biochem. Physiol. 159: 154-162 (<https://doi.org/10.1016/j.pestbp.2019.06.011>).
  10. Yu R., Liu W., Zhao X., Zhang M., Li D., Zuber R., Ma E., Zhu K. Y., Moussian B., Zhang J. 2019. LmCDA1 organizes the cuticle by chitin deacetylation in *Locusta migratoria*. Insect Mol. Biol. 28: 301-312 (<https://doi.org/10.1111/imb.12554>).
  11. Liu X., Zhang J., Zhu K. Y. 2019. Chitin in arthropods: Biosynthesis, modification and metabolism. Targeting Chitin-Containing Organisms. Book series: Adv. Exp. Med. Biol. 1142: 169-207 ([10.1007/978-981-13-7318-3\\_9](https://doi.org/10.1007/978-981-13-7318-3_9)).
  12. Tadesse T. M., Subramanyam Bh, Zhu K. Y., Campbell J. F. 2019. Contact toxicity of filter cake and Triplex powders from Ethiopia against adults of *Sitophilus zeamais* (Coleoptera: Curculionidae). J. Econ. Entomol. 112: 1469-1475 (<https://doi.org/10.1093/jee/toz036>).
  13. Song H., Fan Y., Zhang J., Cooper A. M. W., Silver K., Li D., Li T., Ma E., Zhu K. Y., Zhang J. 2019. Contributions of dsRNases to differential RNAi efficiencies between the injection and oral delivery of dsRNA in migratory locust. Pest Manag. Sci. 75: 1707-1717 (<https://doi.org/10.1002/ps.5291>).
  14. Lanka S. K., Arthur F. H., Campbell J. F., Zhu K. Y. 2019. Evaluation of residual efficacy of pyrethrin + methoprene aerosol on two dermestids: Impact of particle size, species and temperature. Special Issue: Improving Stored Product Insect Pest Management, Insects 10: 142 (<https://doi.org/10.3390/insects10050142>).
  15. Liu X., Cooper A. M. W., Zhang J., Zhu K. Y. 2019. Biosynthesis, modifications and degradation of chitin in the formation and turnover of peritrophic matrix in insects. J. Insect Physiol. 114: 109-115 (<https://doi.org/10.1016/j.jinsphys.2019.03.006>).
  16. Cooper A. M. W., Silver K., Zhang J., Park Y., Zhu K. Y. 2019. Molecular mechanisms influencing efficiency of RNA interference in insects. Pest Manag. Sci. 75: 18-28 (<https://doi.org/10.1002/ps.5126>).
  17. Tadesse T. M., Subramanyam B., Zhu K. Y., Campbell J. F. 2019. Contact toxicity of filter cake and Triplex powders from Ethiopia against *Sitophilus oryzae*. J. Stored Prod. Res. 80: 34-40 (<https://doi.org/10.1016/j.jspr.2018.11.005>).
  18. Zhu W., Zhang X., Wu H., Liu J., Zhu K. Y., Zhang J., Ma E. 2018. Metabolic activity of cytochrome P450s towards four pyrethroids in midgut tissue from migratory locust (*Locusta migratoria*). J. Econ. Entomol. 111: 2817-2823 (<https://doi.org/10.1093/jee/toy299>).
  19. Morrison III W. R., Wilkins R. V., Gerken A. R., Scheff D. S., Zhu K. Y., Arthur F. H., Campbell J. F. 2018. Mobility of adult *Tribolium castaneum* (Coleoptera: Tenebrionidae) and *Rhyzopertha dominica* (Coleoptera: Bostrichidae) after exposure to long-lasting insecticide netting. J. Econ. Entomol. 111: 2443-2453 (<https://doi.org/10.1093/jee/toy173>).
  20. Zhang T., Liu W., Li D., Gao L., Ma E., Zhu K. Y., Moussian B., Li S., Zhang J. 2018. *LmCht5-1* promotes pro-nymphal molting during locust embryonic development. Insect Biochem. Mol. Biol. 101: 124-130 (<https://doi.org/10.1016/j.ibmb.2018.09.001>).
  21. Zhang X., Kang X., Wu H., Silver K., Zhang J., Ma E., Zhu K. Y. 2018. Transcriptome-wide survey, gene expression profiling and exogenous chemical-induced transcriptional responses of cytochrome P450 superfamily genes in migratory locust (*Locusta migratoria*). Insect Biochem. Mol. Biol. 100: 66-77 (<https://doi.org/10.1016/j.ibmb.2018.06.006>) (No. 11 Most Downloaded Paper as of 11/23/2018).
  22. Wang H., Zhang J., Zhao S., Zhu K. Y., Wu Y. 2018. Limited variations in susceptibility to an insecticidal double-stranded RNA (dsv*ATPaseE*) among a laboratory strain and seven genetically

- differentiated field populations of *Tribolium castaneum*. Pestic. Biochem. Physiol. 149: 143-148 (<https://doi.org/10.1016/j.pestbp.2018.06.005>) (No. 17 Most Downloaded Paper as of 10/17/2018).
23. Liu J., Zhang X., Wu H., Gao Y., Silver K., Ma E., Zhang J., Zhu K. Y. 2018. Comparisons of microsomal cytochrome P450 content and enzymatic activity towards selected model substrates and insecticides in different tissues from the migratory locust (*Locusta migratoria*). Chemosphere 208: 366-373 (<https://doi.org/10.1016/j.chemosphere.2018.05.179>).
  24. Tang G., Yao J., Zhang X., Lu N., Zhu K. Y. 2018. Comparison of gene expression profiles in the aquatic midge (*Chironomus tentans*) larvae exposed to two major agricultural pesticides. Chemosphere 194: 745-754 (<https://doi.org/10.1016/j.chemosphere.2017.12.040>).
  25. Tang G., Yao J., Li D., He Y., Zhu Y.-C., Zhang X., Zhu K. Y. 2017. Cytochrome P450 genes from the aquatic midge *Chironomus tentans*: Atrazine-induced up-regulation of *CtCYP6EX3* enhanced the toxicity of chlorpyrifos. Chemosphere 186: 68-77 (<https://doi.org/10.1016/j.chemosphere.2017.07.137>).
  26. Song H., Zhang J., Li D., Cooper A. M. W., Silver K., Li T., Liu X., Ma E., Zhu K. Y., Zhang J. 2017. A double-stranded RNA degrading enzyme reduces the efficiency of oral RNA interference in migratory locust. Insect Biochem. Mol. Biol. 86: 68-80 (<https://doi.org/10.1016/j.ibmb.2017.05.008>).
  27. Yao J., Zhu Y.-C., Lu N., Buschman L. L., Zhu K. Y. 2017. Comparisons of transcriptional profiles of gut genes between Cry1Ab-resistant and susceptible strains of *Ostrinia nubilalis* revealed genes possibly related to the adaptation of resistant larvae to transgenic Cry1Ab corn. Int. J. Mol. Sci. 18: 301 (<https://doi.org/10.3390/ijms18020301>).
  28. Shi X.-K., Zhang Y.-W., Zhu K. Y., Ma E.-B., Zhang J.-Z., Liu X.-J., Wu H.-H. 2017. Comparison of silencing efficacy of the antenna-rich genes by different dsRNA delivery methods in *Locusta migratoria*. Chin. J. Appl. Entomol. 54: 780-790 (<https://doi.org/10.7679/j.issn.2095-1353.2017.094>).
  29. Yu R., Liu W., Li D., Zhao X., Ding G., Zhang M., Ma E., Zhu K. Y., Li S., Moussian B., Zhang J. 2016. Helicoidal organization of chitin in the cuticle of the migratory locust requires the function of the chitin deacetylase LmCDA2. J. Biol. Chem. 291: 24352-24363 (<https://doi.org/10.1074/jbc.M116.720581>).
  30. Guo Y., Wu H., Zhang X., Ma E., Guo Y., Zhu K. Y., Zhang J. 2016. RNA interference of cytochrome P450 CYP6F subfamily genes affects susceptibility to different insecticides in *Locusta migratoria*. Pest Manag. Sci. 72: 2154-2165 (<https://doi.org/10.1002/ps.4248>).
  31. Zhu K. Y. 2016. Preface to the special issue: Insecticide toxicology in China. Pestic. Biochem. Physiol. 132: 1-2 (<https://doi.org/10.1016/j.pestbp.2016.07.008>).
  32. Zhu W., Yu R., Wu H., Zhang X., Liu Y., Zhu K. Y., Zhang J., Ma E. 2016. Identification and characterization of two *CYP9A* genes associated with pyrethroid detoxification in *Locusta migratoria*. Pestic. Biochem. Physiol. 132: 65-71 (<https://doi.org/10.1016/j.pestbp.2016.01.001>).
  33. Yu Z., Zhang X., Wang Y., Moussian B., Zhu K. Y., Li S., Ma E., Zhang J. 2016. LmCYP4G102: An oenocyte-specific cytochrome P450 gene required for cuticular waterproofing in the migratory locust, *Locusta migratoria*. Sci. Rep. 6: 29980 (<https://doi.org/10.1038/srep29980>).
  34. Zhu K. Y., Merzendorfer H., Zhang W., Zhang J., Muthukrishnan S. 2016. Biosynthesis, turnover and function of chitin in insects. Annu. Rev. Entomol. 61: 177-196 (<https://doi.org/10.1146/annurev-ento-010715-023933>).
  35. Oppert B., Guedes R. N. C., Aikins M. J., Phillips T.W., Chen Z., Zhu K. Y., Opit G. P., Hoon K., Sun Y., Meredith G., Bramlett K., Supunpong Hernandez N., Sanderson B., Taylor M., Dhingra D., Blakey B., Lorenzen M., Fallis L., Arthur F. 2015. Genes related to mitochondrial functions are differentially expressed in phosphine-resistant and -susceptible *Tribolium castaneum*. BMC Genomics 16: 968 (<https://doi.org/10.1186/s12864-015-2121-0>).
  36. Liu Y., Wu H., Yu Z., Guo Y., Zhang J., Zhu K. Y., Ma E. 2015. Transcriptional response of two metallothionein genes (*OcMT1* and *OcMT2*) and histological changes in *Oxya chinensis*

- (Orthoptera: Acridoidea) exposed to three trace metals. *Chemosphere* 139: 310-317 (<https://doi.org/10.1016/j.chemosphere.2015.06.043>).
37. Guo Y., Zhang X., Wu H., Yu R., Zhang J., Zhu K. Y., Guo Y., Ma E. 2015. Identification and functional analysis of a cytochrome P450 gene *CYP9AQ2* involved in deltamethrin detoxification from *Locusta migratoria*. *Pestic. Biochem. Physiol.* 122: 1-7 (<https://doi.org/10.1016/j.pestbp.2015.01.003>).
  38. Kim Y. H., Soumaila Issa M., Cooper A. M. W., Zhu K. Y. 2015. RNA interference: Applications and advances in insect toxicology and insect pest management. *Pestic. Biochem. Physiol.* 120: 109-117 (<https://doi.org/10.1016/j.pestbp.2015.01.002>) (No. 6 Most Cited Article in PBP as of 03/25/2019 since 2015).
  39. Zhang J., Ge P., Li D., Guo Y., Zhu K. Y., Ma E., Zhang J. 2015. Two homologous carboxylesterase genes from *Locusta migratoria* with different tissue expression patterns and roles in insecticide detoxification. *J. Insect Physiol.* 77: 1-8 (<https://doi.org/10.1016/j.jinsphys.2015.03.013>).
  40. Xiao D., Gao X., Xu J., Liang X., Li Q., Yao J., Zhu K. Y. 2015. Clathrin-dependent endocytosis plays a predominant role in cellular uptake of double-stranded RNA in the red flour beetle. *Insect Biochem. Mol. Biol.* 60: 68-77 (<https://doi.org/10.1016/j.ibmb.2015.03.009>) (No. 12 Most Cited Article in IBMB as of 11/23/2018 since 2015).
  41. Zhang X., Mysore K., Flannery E., Michel K., Severson D. W., Zhu K. Y., Duman-Scheel M. 2015. Chitosan/interfering RNA nanoparticle mediated gene silencing in disease vector mosquito larvae. *J. Vis. Exp.* 97: e52523 (<https://doi.org/10.3791/52523>) (<https://www.jove.com/video/52523/chitosaninterfering-rna-nanoparticle-mediated-gene-silencing-disease>).
  42. Li D., Zhang J., Wang Y., Liu X., Ma E., Sun Y., Li S., Zhu K. Y., Zhang J. 2015. Two chitinase 5 genes from *Locusta migratoria*: Molecular characteristics and functional differentiation. *Insect Biochem. Mol. Biol.* 58: 46-54 (<https://doi.org/10.1016/j.ibmb.2015.01.004>) (No. 6 Most Cited Article in IBMB as of 11/23/2018 since 2015).
  43. Liang X., Xiao D., He Y., Yao J., Zhu G., Zhu K. Y. 2015. Insecticide-mediated up-regulation of cytochrome P450 genes in the red flour beetle (*Tribolium castaneum*). *Int. J. Mol. Sci.* 16: 2078-2098 (<https://doi.org/10.3390/ijms16012078>).
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\* **Highly Cited Paper:** In the top 1% of the academic field of Plant, Animal Science based on a highly cited threshold for the field and publication year.

## Books and Book Chapters

1. Zhao X., Zhang J., Zhu K. Y. 2019. Chapter 1: Chito-protein matrices in arthropod exoskeletons and peritrophic matrices. pp. 3-56. *In:* Cohen E., Merzendorfer H. [eds.], Extracellular Sugar-Based Biopolymers Matrices. Biologically-Inspired Systems, Vol. 12. Springer Nature, Switzerland.
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## **X. Research Presentations (Total 382 with 148 Invited)**

1. Romano M., Cooper A. M. W., Yu Z., Shi X., Zhu K. Y., Application of RNA interference to analyze the function of soluble guanylyl cyclase  $\alpha$  subunit (*TcsGCa*) gene in the red flour beetle, *Tribolium castaneum*. Poster presented by MR at the Kansas State University Undergraduate Research Symposium, Manhattan, KS. Dec. 10, 2019.

2. Silver K., Featherston K., Menghwar S., Fatehi S. F., Park Y., Zhu K. Y., Enhancing RNAi in *Aedes aegypti* using insight from beetles. Presented by KS in Member Symposium: Arthropod-Vertebrate Molecular Interactions and Pathogen Emergence at the Entomology 2019 National Meeting of the Entomological Society of America, St. Louis, MO. Nov. 17-20, 2019 (**INVITED**).
3. Lanka S., Arthur F., Campbell J., Zhu K. Y., Comparative susceptibility of two dermestid species to methoprene and pyriproxyfen, and to methoprene between diapausing and non-diapausing larvae. A 10-min paper presented by SL at the Entomology 2019 National Meeting of the Entomological Society of America, St. Louis, MO. Nov. 17-20, 2019.
4. Featherston K., Park Y., Zhu K. Y., Silver K., Characterizing exosome cargoes from a *Diabrotica* cell line. Student 10-min paper competition presented by KF at the Entomology 2019 National Meeting of the Entomological Society of America, St. Louis, MO. Nov. 17-20, 2019.
5. Hamblin M., Zukoff S., Zhu K. Y., Spiesman B., Creating education programs to address agribusiness professional's perception of pesticide effects on non-target species and the environment. Student 10-min paper competition presented by MH at the Entomology 2019 National Meeting of the Entomological Society of America, St. Louis, MO. Nov. 17-20, 2019.
6. Yu Z., Hu F., Chen H., Silver K., Campbell J., Arthur F., Zhu K. Y., Molecular and functional analyses of cytochrome P450 4G subfamily genes in *Tribolium castaneum*. A poster presented by KYZ at the Entomology 2019 National Meeting of the Entomological Society of America, St. Louis, MO. Nov. 17-20, 2019.
7. Zhu K. Y., Cooper A. M. W., Song H., Yu Z., Zhang J., Silver K., Towards understanding the mechanisms affecting RNAi efficiency in insects. Presented by KYZ at the Insect Group Meeting, Department of Biochemistry and Biophysics, Kansas State University, Manhattan, Kansas, Oct. 25, 2019.
8. Zhu K. Y., RNAi and potential in pest management. Copesan Technical Committee Meeting at Kansas State University, Manhattan, KS, Sep. 24, 2019 (**INVITED**).
9. Fan Y., Song H., Chai L., Ma E., Zhu K. Y., Zhang J., Identification and functional characterization of double-stranded RNA degrading enzymes in *Ostrinia furnacalis*. Presented by YF at the Second International Conference on Insect Pest Management, Guiyang, China, July 26-29, 2019.
10. Gao L., Wang Y., Fan Y., Ma E., Zhu K. Y., Zhang J., LmAgo1, LamAgo2a/LmAgo2b and LmAgo3 contribute to RNAi efficiency in *Locusta migratoria*. Presented by LG at the Second International Conference on Insect Pest Management, Guiyang, China, July 26-29, 2019.
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12. Cooper A. M. W., Song H., Yu Z., Silver K., Zhang J., Zhu K. Y., Characterization of core RNA interference pathway genes in European corn borer. Presented by AC at the Second International Conference on Insect Pest Management, Guiyang, China, July 26-29, 2019 (**INVITED**).
13. Zhang J., Zhao X., Liu X., Zhang T., Moussian B., Zhu K. Y., Cuticle formation of *Locusta migratoria* and its potentials in insect pest management. Presented by JZ at the Second International Conference on Insect Pest Management, Guiyang, China, July 26-29, 2019 (**INVITED**).
14. Silver K., Featherston K., Cooper A. M. W., Park Y., Zhu K. Y., Novel strategies for enhancing RNAi in pest insects. Presented by KS at the Second International Conference on Insect Pest Management, Guiyang, China, July 26-29, 2019 (**INVITED**).
15. Zhu K. Y., Liu X., Cooper A. M. W., Yu Z., Silver K., Ma E., Zhang J., Targeting chitin biosynthetic and metabolic pathways for arthropod pest management. Presented by KYZ at the Second International Conference on Insect Pest Management, Guiyang, China, July 26-29, 2019 (**INVITED**).
16. Biondi M., Cooper A. M. W., Song H., Yu Z., Zhu K. Y., Effects of pH on double-stranded RNA stability in European corn borer nucleases. Poster presented by MB at the Research Symposium of

the Research and Extension Experiences for Undergraduate (REEU) Program, Kansas State University, Manhattan, KS, July 25, 2019.

17. Zhu K. Y., Cooper A. M. W., Song H., Yu Z., Zhang J., Silver K., Mechanisms affecting RNAi efficiency in insects. Presented by KYZ at the Symposium on Insect RNAi Mechanisms and Physiology, Shanxi University, Taiyuan, China, July 22-25, 2019 (**INVITED**).
18. Silver K., Featherston K., Park Y., Zhu K. Y., The ins and outs of systemic RNAi in insects. Presented by KS at the Symposium on Insect RNAi Mechanisms and Physiology, Shanxi University, Taiyuan, China, July 22-25, 2019 (**INVITED**).
19. Cooper A. M. W., Song H., Yu Z., Silver K., Zhang J., Zhu K. Y., Comparison of double-stranded RNA-degrading nuclease (dsRNase) genes in European corn borer and western corn rootworm. Presented by AC at the Symposium on Insect RNAi Mechanisms and Physiology, Shanxi University, Taiyuan, China, July 22-25, 2019 (**INVITED**).
20. Zhang J., Song H., Shi X., Gao L., Ma E., Zhu K. Y., Contributions of dsRNases and physiological pH to differential RNAi efficiency in *Locusta migratoria*. Presented by JZ at the Symposium on Insect RNAi Mechanisms and Physiology, Shanxi University, Taiyuan, China, July 22-25, 2019 (**INVITED**).
21. Asuncion F. X. B., Brabec D. L., Casada M. E., Maghirang R. G., Campbell J. F., Arthur F. H., Zhu K. Y., Martin D. E., Spray characterization for stored product insect control. ASABE Paper No. 1901447. Presented at the ASABE Annual International Meeting, Boston, Massachusetts. July 7-10, 2019.
22. Cooper A. M. W., Song H., Yu Z., Silver K., Zhang J., Zhu K. Y., Comparison of double-stranded RNA-degrading nuclease (dsRNase) genes in European corn borer and western corn rootworm. Poster presented by AC at the 12<sup>th</sup> Arthropod Genomics Symposium at Kansas State University, Manhattan, KS. June 12-14, 2019.
23. Cooper A. M. W., Song H., Yu Z., Silver K., Zhang J., Zhu K. Y., Characterization of core RNA interference pathway genes in European corn borer. Poster presented by AC at the 12<sup>th</sup> Arthropod Genomics Symposium at Kansas State University, Manhattan, KS. June 12-14, 2019.
24. Wang L., Yu Z., Liu Y. B., Silver K., Zhu K. Y., Identification and functional analysis of soluble guanylate cyclase genes in the red flour beetle, *Tribolium castaneum*. Poster presented by LW at the 12<sup>th</sup> Arthropod Genomics Symposium at Kansas State University, Manhattan, KS. June 12-14, 2019.
25. Yu Z., Hu F., Chen H., Silver K., Zhu K. Y., Characterization of cytochrome P450 4G subfamily genes in *Tribolium castaneum*. Poster presented by ZY at the 12<sup>th</sup> Arthropod Genomics Symposium at Kansas State University, Manhattan, KS. June 12-14, 2019.
26. Featherston K., Park Y., Zhu K. Y., Silver K., Characterizing exosomes derived from a *Diabrotica* cell line. Presented by KF at the 74<sup>th</sup> ESA North Central Branch Meeting, Cincinnati, OH. Mar. 17-20, 2019.
27. Asuncion F. X. B., Brabec D. L., Casada M. E., Maghirang R. G., Campbell J. F., Arthur F. H., Zhu K. Y., Martin D. E., Spray characterization for stored product insect control. Presented at the NC-213 Annual Meeting, Ames, IA. Feb. 26-27, 2019.
28. Asuncion F. X. B., Schumacher K. R., Maghirang R. G., Casada M. E., Campbell J. F., Arthur F. H., Brabec D. L., Zhu K. Y., Elsayed S. G., 2019. Numerical simulation of pyrethrin deposition. Presented at the 11th Annual All-Staff Poster Exhibit of MRI Global, Kansas City, MO. Jan. 17, 2019.
29. Parks L., Cooper A., Song H., Yu Z., Zhang H., Silver K., Zhang J., Zhu K. Y., Effects of nanoparticles on doubled stranded RNA stability in moth hemolymph. Poster presented by LP at the Third Annual Entomology Undergraduate Research Symposium at Kansas State University, Manhattan, KS. Dec. 6, 2018.
30. Reyanldo M., Cooper A., Song H., Yu Z., Zhang H., Silver K., Zhang J., Zhu K. Y., Effects of nanoparticles on doubled stranded RNA stability in corn soil. Poster presented by MR at the Third

Annual Entomology Undergraduate Research Symposium at Kansas State University, Manhattan, KS. Dec. 6, 2018.

31. Zhu K. Y., Cooper A. M. W., Song H., Zhang J., Silver K., Mechanisms affecting RNAi efficiency in insects. Presented by KYZ in PBT Section Symposium: RNAi: Mechanism of Action and Resistance to dsRNA at the 2018 Joint Annual Meeting of the Entomological Society of America and the Entomological Society of Canada, Vancouver, Canada. Nov. 11-14, 2018 (**INVITED**).
32. Lanka S., Arthur F., Campbell J., Zhu K. Y., Influence of temperature on residual efficacy of aerosol insecticidal treatment against two dermestids (Coleoptera: Dermestidae). 10-minute paper presented by FA at the 2018 Joint Annual Meeting of the Entomological Society of America and the Entomological Society of Canada, Vancouver, Canada. Nov. 11-14, 2018.
33. Campbell J., Arthur F., Brabec D., Casada M., Asuncion F. X., Scheff D., Lanka S., Maghirang R., Zhu K. Y., Entomology and engineering: Working across borders to improve aerosol insecticide efficacy inside food facilities. Presented by JC in Member Symposium: Sharing Ideas and Food: Stored Product Pest Control Across Interdisciplinary and Geographic Borders at the 2018 Joint Annual Meeting of the Entomological Society of America and the Entomological Society of Canada, Vancouver, Canada. Nov. 11-14, 2018 (**INVITED**).
34. Silver K., Park Y., Zhu K. Y., Systemic RNAi in a *Diabrotica* cell line. 10-minute paper presented by SL at the 2018 Joint Annual Meeting of the Entomological Society of America and the Entomological Society of Canada, Vancouver, Canada. Nov. 11-14, 2018.
35. Zhu K. Y., Developing molecular strategies for insect pest management. Department of Biological Sciences, Wichita State University, Wichita, KS, Oct. 8, 2018 (**INVITED**).
36. Zhu K. Y., Developing molecular strategies for insect pest management. Department of Entomology, University of Illinois at Urbana-Champaign, Champaign, IL, Oct. 1, 2018 (**INVITED**).
37. Asuncion F. X., Maghirang R., Casada M., Campbell J., Arthur F., Brabec D., Zhu K. Y., Schumacher K., Computational fluid dynamics simulation of pyrethrin aerosol deposition. Poster presented by FXA at the 2018 American Society of Agricultural and Biological Engineers Annual Meeting, Detroit, MI, Jul. 29- Aug. 1, 2018.
38. Yao K., Anthony J., Hagstrum D., Maghirang R., Zhu K. Y., Subramanyam B., Dynamic dewpoint isotherms of hard red winter wheat (HRW) and a synthetic amorphous zeolite intended for grain protection. Presented by KY at the 73<sup>rd</sup> ESA North Central Branch Meeting, Madison, WI, Mar. 18-21, 2018.
39. Zhang X., Zhang J., Heerman M., Cooper A. M. W., Silver K., Zhu K. Y., Double-stranded RNA nanoparticles to enhance oral RNAi efficiency in insects. Presented by KYZ at the Ninth International IPM Symposium, Baltimore, MD. Mar. 19-22, 2018 (**INVITED**).
40. Zhu K. Y., Molecular approaches to developing new strategies for insect pest management. Department of Plant Protection, Huazhong Agricultural University, Wuhan, China, Jan. 9, 2018 (**INVITED**).
41. Knight M., Cooper A. M. W., Silver K., Zhu K. Y., Effects of EDTA feeding on survival and development of European corn borer larvae. Poster presented by MK at the Second Annual Entomology Undergraduate Research Symposium at Kansas State University, Manhattan, KS. Dec. 7, 2017.
42. Ismert K., Cooper A. M. W., Silver K., Zhu K. Y., Effects of feeding Fluorescent Brightener 28 and Blue Dextran to European corn borer larvae. Poster presented by KI at the Second Annual Entomology Undergraduate Research Symposium at Kansas State University, Manhattan, KS. Dec. 7, 2017.
43. Cooper A. M. W., Zhu K. Y., Strategies for enhancing RNAi in the European corn borer. Presented by AMWC in the Insect Biochemistry Seminar Series in the Department of Biochemistry, Molecular Biophysics at Kansas State University, Manhattan, KS. Dec. 1 2017.

44. Cooper A. M. W., Bai J., Zhu K. Y., Strategies for enhancing oral RNAi efficiency in the European corn borer. Presented by AMWC in PBT Section Symposium: Insecticide Science in the 21<sup>st</sup> Century: the Age of Increased Targets, Resistance, and Biorational Insecticides at the 2017 National Annual Meeting of the Entomological Society of America, Denver, CO. Nov. 5-8, 2017 **(INVITED)**.
45. Zhu K. Y., Proper chitin content in peritrophic matrix is critically important to insect growth and development. Presented in PBT Section Symposium: the Peritrophic Matrix: from Past to Future at the 2017 National Annual Meeting of the Entomological Society of America, Denver, CO. Nov. 5-8, 2017 **(INVITED)**.
46. Chang J., Wu H., Yao J., Campbell J. F., Arthur F. H., Zhu K. Y., Characterization of four mitochondrial cytochrome P450 genes in *Tribolium castaneum*. Poster presented by KYZ in PBT Poster Section: Physiology and Morphology at the 2017 National Annual Meeting of the Entomological Society of America, Denver, CO. Nov. 5-8, 2017.
47. Zhu K. Y., Career development and job hunting strategies in life sciences. The Department of Pesticides, Nanjing Agricultural University, Nanjing, China. July 9, 2017 **(INVITED)**.
48. Zhu K. Y., The path to scientific publication. The Department of Pesticides, Nanjing Agricultural University, Nanjing, China. July 9, 2017 **(INVITED)**.
49. Zhu K. Y., Developing new strategies for insect pest management in the genomics era. The College of Life Sciences, Nanjing Normal University, Nanjing, China. July 8, 2017 **(INVITED)**.
50. Zhu K. Y., Developing new strategies for insect pest management in the genomics era. The College of Plant Protection, Nanjing Agricultural University, Nanjing, China. July 5, 2017 **(INVITED)**.
51. Song H., Zhang J., Li D., Cooper A. M. W., Silver K., Li T., Liu X., Ma E., Zhu K. Y., Zhang J., A double-stranded RNA degrading enzyme reduces the efficiency of oral RNA interference in migratory locust. The Joint Meeting of the Third International Conference of Insect Genomics and the Sixth International Symposium on Insect Physiology, Biochemistry and Molecular Biology. Hangzhou, China. July 1-4, 2017.
52. Zhu K. Y., Cellular uptake of double-stranded RNA in insects. The Joint Meeting of the Third International Conference of Insect Genomics and the Sixth International Symposium on Insect Physiology, Biochemistry and Molecular Biology. Hangzhou, China. July 1-4, 2017 **(INVITED PLENARY SPEECH)**.
53. Liu J., Zhang X., Wu H., Gao C., Ma E., Zhang J., Zhu, K. Y., Biochemical characteristics and detoxification roles of cytochrome P450 from migratory locust (*Locusta migratoria*). The Second International Symposium on Insect Molecular Toxicology and Chitin Metabolism. Taiyuan, China. June 27-30, 2017.
54. Yu Z., Zhang X., Wang Y., Moussian B., Zhu K. Y., Li S., Ma E., Zhang J., LmCYP4G102: An oenocyte-specific cytochrome P450 gene required for cuticular waterproofing in the migratory locust, *Locusta migratoria*. The Second International Symposium on Insect Molecular Toxicology and Chitin Metabolism. Taiyuan, China. June 27-30, 2017.
55. Zhu K. Y., Xiao D., Cooper A. M. W., Silver K., Clathrin-dependent endocytosis as a major mechanism of cellular uptake of dsRNA in the red flour beetle. The Second International Symposium on Insect Molecular Toxicology and Chitin Metabolism. Taiyuan, China. June 27-30, 2017 **(INVITED KEYNOTE SPEECH)**.
56. Zhu K. Y., Kim, Y. H., Xiao D., Cooper A. M. W., Silver K., Cellular uptake and endosomal escape of dsRNA in insects. Presented by KY at the 72<sup>nd</sup> ESA North Central Branch Meeting, Indianapolis, IN. June 4-7, 2017.
57. Zhu K. Y., Career development and job hunting strategies in life sciences. Popenoe Club of Entomology, Kansas State University, Manhattan, KS. Feb. 1, 2017 **(INVITED)**.
58. Zhu K. Y., Developing new strategies for insect pest management in the genomics era. Department of Entomology, Louisiana State University, Baton Rouge, LA. Oct. 28, 2016 **(STUDENT-INVITED SEMINAR)**.

59. Zhu K. Y., Xiao D., Kim Y. H., Cooper A., Mechanism of cellular uptake of double-stranded RNA in insects. Presented by KYZ in the Symposium: Mechanisms Affecting the Efficiency of RNA Interference in Insects at the XXV International Congress of Entomology, Orlando, FL. Sep. 25-30, 2016 **(INVITED)**.
60. Zhang J., Song H., Ma E., Zhu K. Y., Effect of dsRNase on the efficiency of RNA interference. Presented by JZ in the Symposium: Mechanisms Affecting the Efficiency of RNA Interference in Insects at the XXV International Congress of Entomology, Orlando, FL. Sep. 25-30, 2016 **(INVITED)**.
61. Cooper A., Kim Y. H., Zhu K. Y., Identification and characterization of double stranded ribonucleases in *Diabrotica virgifera virgifera* (Coleoptera: Chrysomelidae) and *Ostrinia nubilalis* (Lepidoptera: Crambidae). Presented by AC at the XXV International Congress of Entomology, Orlando, FL. Sep. 25-30, 2016.
62. Xu Z., Hao P., Zhu K. Y., Developing RNA interference-based approaches for managing the German cockroach, *Blattella germanica*. Poster presented by ZX at the XXV International Congress of Entomology, Orlando, FL. Sep. 25-30, 2016.
63. Zhu K. Y., Mechanisms of double-stranded RNA uptake in major insect pests. USDA/NIFA Project Director Meeting. Orlando, FL. Sep. 24, 2016.
64. Zhu K. Y., Developing new strategies for insect pest management in the genomics era. Institution of Plant Protection, Shanxi Academy of Agricultural Sciences, Taiyuan, Shanxi, China. June 24, 2016 **(INVITED)**.
65. Zhu K. Y., Developing new strategies for insect pest management in the genomics era. A 45-min featured presentation at the PBT Networking Section, the 63rd National Annual Meeting of the Entomological Society of America, Minneapolis, MN. Nov. 15-18, 2015 **(INVITED)**.
66. Cooper A., Kim Y. H., Zhu K. Y., Comparative studies on the lethal giant larvae gene in *Ostrinia nubilalis* (Lepidoptera: Pyralidae) and *Diabrotica virgifera virgifera* (Coleoptera: Chrysomelidae). Poster presented by AC at the 63rd National Annual Meeting of the Entomological Society of America, Minneapolis, MN. Nov. 15-18, 2015.
67. Kim Y. H., Zhu K. Y., Comparative analyses of selected genes possibly involved in cellular uptake of dsRNA between *Diabrotica virgifera virgifera* and *Ostrinia nubilalis*. Poster presented by YHK at the 63rd National Annual Meeting of the Entomological Society of America, Minneapolis, MN. Nov. 15-18, 2015.
68. Coskun B., Soumaila Issa M., Kim Y. H., Zhu K. Y., Genome-wide survey of vacuolar-ATPase genes in the yellow fever mosquito, *Aedes aegypti* (Diptera: Culicidae). Poster presented by BC at the 63rd National Annual Meeting of the Entomological Society of America, Minneapolis, MN. Nov. 15-18, 2015.
69. Zhu K. Y., Developing RNAi-based strategies for insect pest management. 2015 Yangling International Agri-Science Forum. Yangling, Shaanxi Province, China. Nov. 5-7, 2015 **(INVITED)**.
70. Zhu K. Y., RNA interference-based strategies for insect pest management. School of Life Sciences, Anhui Agricultural University, Hefei, Anhui Province, China. June 23, 2015 **(INVITED)**.
71. Zhu K. Y., The path to scientific publication. Institute of Applied Biology, Shanxi University, Taiyuan, Shanxi Province, China. June 22, 2015 **(INVITED)**.
72. Zhu K. Y., The path to scientific publication. College of Agriculture, Shanxi Agricultural University, Taigu, Shanxi Province, China. June 19, 2015 **(INVITED)**.
73. Zhu K. Y., Clathrin-dependent endocytosis as a major mechanism of cellular uptake of dsRNA in the red flour beetle. *Symposium: Potential of RNAi Technology in Entomology* at the 70<sup>th</sup> ESA North Central Branch Meeting, Manhattan, KS. May 31-June 3, 2015 **(INVITED)**.
74. Yao K., Bhadriraju S., Zhu K. Y., Kingsly A., Efficacy of a synthetic amorphous zeolite against five species of stored-grain insects on wheat and concrete. Presented by KY at the 70<sup>th</sup> ESA North Central Branch Meeting, Manhattan, KS. May 31-June 3, 2015

75. Zhu K. Y., Mechanisms of double-stranded RNA uptake in major insect pests. USDA/NIFA Project Director Workshop. Washington, DC. Apr. 28-29, 2015.
76. Zhu K. Y., Cellular uptake of dsRNA in the red flour beetle. Faculty Blitz, Department of Entomology, Kansas State University, Manhattan, KS. Feb. 9, 2015.
77. Zhu K. Y., Developing RNAi-based strategies for insect pest management. Joint Meeting of Syngenta Biotechnology, Inc. and the KSU Institute for Commercialization, Manhattan, KS. Dec. 17, 2014 (**INVITED**).
78. Zhu K. Y., Xiao D., Cellular uptake of double-stranded RNA in *Tribolium castaneum*. Presented by KYZ in *PBT Section Symposium: RNAi: Emerging Technology to Overcome Grand Challenges in Entomology* at the 62<sup>nd</sup> National Annual Meeting of the Entomological Society of America, Portland, OR. Nov. 16-19, 2014 (**INVITED**).
79. Soumaila Issa M., Park Y., Ramalho-Ortigao M., Zhu K. Y., Functional analysis of cytochrome P450 genes in the yellow fever mosquito *Aedes aegypti* (Diptera: Culicidae). Presented by MSI at the 62<sup>nd</sup> National Annual Meeting of the Entomological Society of America, Portland, OR. Nov. 16-19, 2014.
80. Zhu K. Y., Developing new strategies for insect pest management in the genomics era. The Commerce Bank Distinguished Graduate Faculty Award Lecture. Kansas State University, Manhattan, KS. Oct. 29, 2014 (**INVITED**).
81. Soumaila Issa M., Park Y., Ramalho-Ortigao M., Zhu K. Y., RNA interference to reveal the role of the nuclear receptor HR96 in up-regulation of cytochrome P450 genes in *Aedes aegypti*. Presented by MSI at the K-State Research Forum, Manhattan, KS. Oct. 28, 2014.
82. Zhu K. Y., RNA interference: Applications in insect toxicology. IUPAC: Fifty Years of Research and Mentoring: Symposium in Honor of the Life and Career of Professor Fumio Matsumura, the 248th ACS National Meeting, Exposition, San Francisco, CA. August 10-14, 2014 (**INVITED**).
83. Zhu K. Y., RNA interference: Applications in insecticide toxicology. The 1<sup>st</sup> International Symposium on Insecticide Toxicology, Guangzhou, China. Aug. 5-7, 2014 (**INVITED**).
84. Kumari M., Merzendorfer H., Arakane Y., Zhu K. Y., Beeman R., Kramer K., Park Y., Muthukrishnan S., The molecular target and mode of action of the acylura insecticide, diflubenzuron. The 1<sup>st</sup> International Symposium on Insecticide Toxicology, Guangzhou, China. Aug. 5-7, 2014 (**INVITED**).
85. Zhu K. Y., RNA interference: Applications in entomological research. Shanxi University, Taiyuan, China. Aug. 1, 2014 (**INVITED**).
86. Zhu K. Y., RNA interference: Applications in entomological research. Zhejiang University, Hangzhou, China. July. 30, 2014 (**INVITED**).
87. Campbell J. F., Arthur F. H., Zhu K. Y., Evaluation of aerosol insecticide efficacy. Presented by JFC at the International Association of Operative Millers Annual Meeting, Omaha, NE. May 19-23, 2014.
88. Zhu K. Y., RNA interference: Applications in entomological research. Chemistry Seminar Series, Monsanto Company, Chesterfield, MO. Apr. 10, 2014 (**INVITED**).
89. Soumaila Issa M., Park Y., Ramalho-Ortigao M., Zhu K. Y., Functional analysis of cytochrome P450 genes in the yellow fever mosquito, *Aedes aegypti* (Diptera: Culicidae). Presented by MSI at the K-State Research Forum, Manhattan, KS. Mar. 26, 2014.
90. Arthur F. H., Kharel K., Zhu K. Y., Campbell J. F., Subramanyam B., Susceptibility of flour beetle life stages to pyrethrin aerosol. Presented by FHA at 2013 Annual International Research Conference on Methyl Bromide Alternatives and Emissions Reductions, San Diego, CA. Nov. 4-6, 2013.
91. Zhu K. Y., Insect pest management in modern agriculture: Challenges and innovative solutions. College of Life Sciences, China Jiliang University, Hangzhou, China. Oct. 10, 2013 (**INVITED**).
92. Yao J., Khajuria C., Buschman L. L., Zhu K. Y., Transcriptional responses to the ingestion of Cry1Ab protoxin and Cry1Ab corn leaves in the gut of *Ostrinia nubilalis* larvae. Presented by KYZ



- in Biopesticides: State of the Art and Future Opportunities Symposium at 246th American Chemical Society National Meeting, Exposition, Indianapolis, IN. Sep. 8-12, 2013 (**INVITED**).
93. Zhu K. Y., Insect pest management in modern agriculture: Challenges and innovative solutions. The 4<sup>th</sup> Insect Science Symposium/Advanced Summer Training Course of Entomological Theory and Method, Institute of Zoology, Chinese Academy of Sciences, Beijing, China. July 12-16, 2013 (**INVITED**).
  94. Soumaila Issa M., Da X., Zhu K. Y., Genome-wide analysis of cytochrome P450 genes in the yellow fever mosquito *Aedes aegypti* (Diptera: Culicidae). Presented by MSI at the 68<sup>th</sup> ESA North Central Branch Meeting in Rapid City, SD, June. 16-19, 2013.
  95. Zhu K. Y., Chitin biosynthetic pathway: A unique target for chemical and RNAi-based insect pest management. The Fourth International Symposium on Insect Physiology, Biochemistry and Molecular Biology, Nanjing, China, June 15-18, 2013 (**INVITED KEYNOTE SPEECH**).
  96. Zhu K. Y., Insect Acetylcholinesterases: Novel functions and prospect as a selective insecticide target. College of Agriculture and Biotechnology, China Agricultural University, Beijing, China. June 1, 2013 (**INVITED**).
  97. Zhu K. Y., Career development and successful job hunting strategies in life sciences. Member Symposium: Overseas Chinese Entomologists Association (OCEA): Global Collaboration and Career Development in Entomology, the 60<sup>th</sup> National Annual Meeting of the Entomological Society of America, Knoxville, TN. Nov. 11-14, 2012 (**INVITED**).
  98. Xiao D., Gao X., Yao J., Zhu K. Y., Significance of lethal giant larvae gene in *Tribolium castaneum* revealed by RNA interference. Presented by DX at the 60<sup>th</sup> National Annual Meeting of the Entomological Society of America, Knoxville, TN. Nov. 11-14, 2012.
  99. Willmott A. L., Cloyd R. A., Zhu K. Y., Residual efficacy of systemic insecticides against the citrus mealybug, *Planococcus citri*. Presented by ALW at the 60<sup>th</sup> National Annual Meeting of the Entomological Society of America, Knoxville, TN. Nov. 11-14, 2012.
  100. Willmott A. L., Cloyd R. A., Zhu K. Y., Pesticide mixtures and western flower thrips, *Frankliniella occidentalis*. Presented by ALW at the 60<sup>th</sup> National Annual Meeting of the Entomological Society of America, Knoxville, TN. Nov. 11-14, 2012.
  101. Tucker A. M., Arthur F. H., Campbell J. F., Zhu K. Y., The efficacy of methoprene + pyrethrin aerosols on *Tribolium castaneum* eggs. Presented by AMT at the 60<sup>th</sup> National Annual Meeting of the Entomological Society of America, Knoxville, TN. Nov. 11-14, 2012.
  102. Zhu K. Y., Delivery of dsRNA through nanoparticles. Program Symposium- RNAi: From Basic Science toward Global Application, the 60<sup>th</sup> National Annual Meeting of the Entomological Society of America, Knoxville, TN. Nov. 11-14, 2012 (**INVITED**).
  103. Kharel K., Arthur F. H., Zhu K. Y., Campbell J. F., Sanitation increases effectiveness of aerosol insecticides in milling facilities. Presented by KK at the 60<sup>th</sup> National Annual Meeting of the Entomological Society of America, Knoxville, TN. Nov. 11-14, 2012.
  104. Kharel K., Arthur F. H., Zhu K. Y., Campbell J. F., Sanitation influences the efficacy of aerosol insecticides. Poster presentation at Research and the State: Graduate student poster session by KK, Kansas State University, Manhattan, KS. Nov. 6, 2012.
  105. Zhu K. Y., RNA interference and its prospects for insect pest management. College of Life Science, Sun Yat-Sen University, Guangzhou, China. Oct. 29, 2012 (**INVITED**).
  106. Liu X., Zhang H., Li S., Zhu K. Y., Ma E., Zhang J., Characterization of a midgut-specific chitin synthase gene (*LmCHS2*) responsible for biosynthesis of chitin of peritrophic matrix in *Locusta migratoria*. Presented by XL at the Second International Symposium on Insect Midgut Biology, Guangzhou, China. Oct. 24-28, 2012.
  107. Khajuria C., Yao J., Buschman L. L., Zhu K. Y., Transcriptome analysis revealed midgut-specific genes involved in Bt toxicity and larval development in the European corn borer. Presented by KYZ at the Second International Symposium on Insect Midgut Biology, Guangzhou, China. Oct. 24-28, 2012 (**INVITED**).

108. Zhang X., Michel K., Zhu K. Y., Explore new insecticidal site targeting on chitin synthesis enzymes in *Anopheles gambiae*. Presented by XZ at the 244<sup>th</sup> American Chemical Society National Meeting, Philadelphia, PA. Aug. 19-23, 2012.
109. Zhu K. Y., RNA interference and its prospects for insect pest management. College of Agriculture and Biotechnology, China Agricultural University, Beijing, China. June 20, 2012 (**INVITED**).
110. Zhu K. Y., Insect pest management in modern agriculture: Challenges and innovative solutions. Institute of Applied Biology, Shanxi University, Taiyuan, China. June 15, 2012 (**INVITED**).
111. Zhu K. Y., Insecticide metabolism. Institute of Applied Biology, Shanxi University, Taiyuan, China. June 11, 2012 (**INVITED**).
112. Willmott A. L., Cloyd R. A., Zhu K. Y., Efficacy of pesticide mixtures on the western flower thrips, *Frankliniella occidentalis* (Thysanoptera: Thripidae). Poster presented by ALW at the 67<sup>th</sup> annual meeting of the North Central Branch of the ESA, Lincoln, NE, June 3-6, 2012.
113. Kharel K., Zhu K. Y., Arthur F. H., Campbell J., Presence of flour can influence the efficacy of pyrethrin aerosol spray against flour beetles. Presented by KK at the 67<sup>th</sup> annual meeting of the North Central Branch of the ESA, Lincoln, NE, June 3-6, 2012.
114. Zhu K. Y., Insect pest management in modern agriculture: Challenges and innovative solutions. Institute of Insect Sciences, Zhejiang University, Hangzhou, China. May 23, 2012 (**INVITED**).
115. Zhu K. Y., Insect acetylcholinesterases: Novel functions and prospect as a selective insecticide target. College of Life Sciences, China Jiliang University, Hangzhou, China. May 22, 2012 (**INVITED**).
116. Willmott A. L., Cloyd R. A., Zhu K. Y., Efficacy of systemic insecticides against the citrus mealybug, *Planococcus citri* (Hemiptera: Pseudococcidae). Presented by ALW at the 17<sup>th</sup> K-State Research Forum, Manhattan, KS. Mar. 8, 2012.
117. Tang G., Zhang X., Yao J., Zhu K. Y., Identification and functional analysis of cytochrome P450 genes from the aquatic midge *Chironomus tentans* (Diptera: Chironomidae). A poster presented by KYZ at the 59<sup>th</sup> Annual Meeting of the ESA, Reno, NV. Nov. 13-16, 2011.
118. Willmott A. L., Cloyd R. A., Zhu K. Y., Efficacy of pesticide mixtures on the western flower thrips (*Frankliniella occidentalis*). Presented by ALM at the 59<sup>th</sup> Annual Meeting of the ESA, Reno, NV. Nov. 13-16, 2011.
119. Tang G., Zhang X., Yao J., Zhu K. Y., Identification and functional analysis of cytochrome P450 genes from the aquatic midge *Chironomus tentans* (Diptera: Chironomidae). A poster presented by KYZ at the 9<sup>th</sup> Ecological Genomics Symposium, Kansas City, MO. Nov. 4-6, 2011.
120. Zhu K. Y., RNA interference of two acetylcholinesterase genes in *Tribolium castaneum* and two chitin synthase genes in *Anopheles gambiae*. Institute of Insect Sciences, Zhejiang University, Hangzhou, China, July 21, 2011 (**INVITED**).
121. Zhu K. Y., Two insect acetylcholinesterases: Insights into novel functions and prospect as selective insecticide target. College of Plant Protection, Northwest A&F University, Yangling, Shaanxi, China, July 16, 2011 (**INVITED**).
122. Zhu K. Y., Comparative genomic analysis of chitinase and chitin synthase gene families from *Anopheles gambiae*. Chinese Center for Disease Control and Prevention (China CDC), Beijing, China. July 12, 2011 (**INVITED**).
123. Zhu K. Y., Two insect acetylcholinesterases: Insights into novel functions and prospect as selective insecticide target. The 3<sup>rd</sup> International Insect Science Symposium/Advanced Summer Training Course of Entomological Theory and Method, Institute of Zoology, Chinese Academy of Sciences, Beijing, China. July 11-15, 2011 (**INVITED**).
124. Zhu K. Y., Comparative genomic analysis of chitinase and chitin synthase gene families from *Anopheles gambiae*. The 3<sup>rd</sup> International Insect Science Symposium/Advanced Summer Training Course of Entomological Theory and Method, Institute of Zoology, Chinese Academy of Sciences, Beijing, China. July 11-15, 2011 (**INVITED**).

125. Zhu K. Y., Zhang X., Zhang J., Nanoparticle-based RNAi to silence chitin synthase genes through larval feeding in *Anopheles gambiae*. Presented by KYZ in the Third International Symposium on Insect Physiology, Biochemistry and Molecular Biology, Shanghai, China, July 2-5, 2011 (**INVITED PLANARY SPEECH**).
126. Guo Y., Zhang J., Yu R., Zhu K. Y., Guo Y., Ma E., Molecular characterizations of cytochrome P450s in oriental migratory locust, *Locusta migratoria*. Presented by YG in the Symposium on Insect Molecular Toxicology and Chitin Metabolism, Shanxi University, Taiyuan, China, June 26-28, 2011.
127. Zhang J., Zhang J., Yang M., Li D., Guo Y., Ma E., Zhu K. Y., Genomics-based approaches to screening carboxylesterase-like genes potentially involved in insecticide resistance in *Locusta migratoria*. Presented by JZ in the Symposium on Insect Molecular Toxicology and Chitin Metabolism, Shanxi University, Taiyuan, China, June 26-28, 2011.
128. Qin G., Jia M., Liu T., Zhang J., Zhu K. Y., Ma E., Characterization and functional analysis of glutathione S-transferases of the migratory locust, *Locusta migratoria*. Presented by GQ in the Symposium on Insect Molecular Toxicology and Chitin Metabolism, Shanxi University, Taiyuan, China, June 26-28, 2011.
129. Zhang J., Zhang J., Yang M., Qin G., Li D., Guo Y., Ma E., Zhu K. Y., Research progress in understanding insecticide resistance in *Locusta migratoria*. Presented by EM in the Symposium on Insect Molecular Toxicology and Chitin Metabolism, Shanxi University, Taiyuan, China, June 26-28, 2011 (**INVITED KEYNOTE SPEECH**).
130. Lang G.-J., Zhu K. Y., Zhang C.-X., Can acetylcholinesterase serve as a target for developing more selective insecticides? Presented by CXZ in the Symposium on Insect Molecular Toxicology and Chitin Metabolism, Shanxi University, Taiyuan, China, June 26-28, 2011 (**INVITED KEYNOTE SPEECH**).
131. Zhu K. Y., Lu Y., Pang Y.-P., Park Y., Gao X., Zhang X., Yao J., Two insect acetylcholinesterases: Insights into novel functions and prospect as selective insecticide target. Presented by KYZ in the Symposium on Insect Molecular Toxicology and Chitin Metabolism, Shanxi University, Taiyuan, China, June 26-28, 2011 (**INVITED KEYNOTE SPEECH**).
132. Yao J., Buschman L. L., Zhu K. Y., Gene expression profiles of *Bt*-resistant and susceptible European corn borer (*Ostrinia nubilalis*) larvae after ingestion of transgenic Cry1Ab corn leaves. A poster presented by JY at the K-State 5<sup>th</sup> Annual Arthropod Genomics Symposium, Kansas City, MO. June 9-12, 2011.
133. Lu Y., Park Y., Gao X., Zhang X., Yao J., Pang Y.-P., Zhu K. Y., Novel functions of two acetylcholinesterase genes in *Tribolium castaneum* revealed by RNA interference. A poster presented by KYZ at the K-State 5<sup>th</sup> Annual Arthropod Genomics Symposium, Kansas City, MO. June 9-12, 2011.
134. Yao J., Khajuria C., Buschman L. L., Zhu K. Y., Gene expression profiles of *Bt*-resistant and susceptible European corn borer larvae, *Ostrinia nubilalis*, after ingestion of transgenic Cry1Ab corn leaves. Presented by JY at the 66<sup>th</sup> ESA North Central Branch Meeting in Minneapolis, MN. Mar. 13-16, 2011.
135. Tucker A. M., Campbell J. F., Arthur F., Zhu K. Y., Efficacy and sub-lethal effects of methoprene and pyrethrin aerosol treatments on *Tribolium castaneum*. Presented by AMT at the 66<sup>th</sup> ESA North Central Branch Meeting in Minneapolis, MN. Mar. 13-16, 2011.
136. Zhu K. Y., Two insect acetylcholinesterases: Insights into the new functions and prospect as novel insecticide targets. Biochemistry Departmental Seminar, Kansas State University, Manhattan, KS. Feb. 23, 2011 (**INVITED**).
137. Yao J., Khajuria C., Buschman L. L., Zhu K. Y., Changes in gene expression in European corn borer larvae (*Ostrinia nubilalis*) in response to *Bacillus thuringiensis* Cry1Ab protoxin exposure. Presented by JY at the Annual Meeting of the ESA, San Diego, CA. Dec. 12-15, 2010.

138. Chen H., Zhang H., Zhu K. Y., Throne J., Induction of reproductive diapause and performance of diapausing parasitoid wasps, *Habrobracon hebetor*, after cold storage. A poster presented by JT at the Annual Meeting of the ESA, San Diego, CA. Dec. 12-15, 2010.
139. Zhu K. Y., Zhang X., Zhang J., Nanoparticle-mediated RNAi to silence chitin synthase genes through larval feeding in *Anopheles gambiae*. Presented by KYZ in the Late-Breaking Symposium: RNA-interference Insect Management: Real-world Applications at the Annual Meeting of the ESA, San Diego, CA. Dec. 12-15, 2010 (**INVITED**).
140. Tang G., Zhang X., Yao J., Zhu K. Y., Characterization of 29 cytochrome P450 genes from the aquatic midge *Chironomus tentans* (Diptera: Chironomidae). A poster presented by GT at the Annual Meeting of the ESA, San Diego, CA. Dec. 12-15, 2010.
141. Lu Y., Park Y., Gao X., Zhu K. Y., RNA interference-based approaches to revealing novel functions of two acetylcholinesterase genes in red flour beetle (*Tribolium castaneum*). A poster presented by KYZ at the Annual Meeting of the ESA, San Diego, CA. Dec. 12-15, 2010.
142. Zhang X., Zhang J., Zhu K. Y., Genome-wide analysis of chitin synthase and chitinase gene families in African malaria mosquito, *Anopheles gambiae*. A poster presented by XZ at the Annual Meeting of the ESA, San Diego, CA. Dec. 12-15, 2010.
143. Tucker A. M., Campbell J. F., Arthur F., Zhu K. Y., Efficacy and sub-lethal effects of methoprene and pyrethrin aerosol treatments on *Tribolium castaneum*. A poster presented by JFC at the Annual Meeting of the ESA, San Diego, CA. Dec. 12-15, 2010.
144. Lu Y., Park Y., Gao X., Zhang X. Pang Y.-P., Zhu K. Y., New functions of two acetylcholinesterase genes revealed by RNA interference in red flour beetle. Presented by KYZ at the Annual Entomology Research and Extension Updates, Kansas State University, Manhattan, KS. Nov. 22, 2010.
145. Zhang X., Zhang J., Zhu, K. Y., Research advances in chitinase and chitin synthase gene families from *Anopheles gambiae*. Presented by KYZ. Department of Entomology, Kansas State University, Manhattan, KS. Nov. 5, 2010 (**INVITED**).
146. Zhang J., Zhang X., Zhu, K. Y., Research advances in chitinase and chitin synthase gene families and nanoparticle-based RNAi in *Anopheles gambiae*. Presented by KYZ. College of Agriculture and Biotechnology, Zhejiang University, Hangzhou, China. Aug. 11, 2010 (**INVITED**).
147. Zhang J., Zhang X., Zhu, K. Y., Research advances in chitinase and chitin synthase gene families from *Anopheles gambiae*. Presented by KYZ. College of Life Sciences, Shaanxi Normal University, Xi'an, China. Aug. 1, 2010 (**INVITED**).
148. Zhang J., Zhang X., Zhu, K. Y., Research advances in chitinase and chitin synthase gene families from *Anopheles gambiae*. Presented by KYZ. Research Institute of Applied Biology, Shanxi University, Taiyuan, China. July 18, 2010 (**INVITED**).
149. Zhang J., Zhang X., Zhu, K. Y., Research advances in chitinase and chitin synthase gene families from *Anopheles gambiae*. Presented by KYZ. Institute of Plant Physiology and Ecology, Chinese Academy of Sciences, Shanghai. July 16, 2010 (**INVITED**).
150. Tucker A. M., Campbell J., Arthur F. A., Zhu K. Y., Horizontal transfer of methoprene by *Tribolium castaneum*. A poster to be presented by JC at 10<sup>th</sup> International Working Conference on Stored Product Protection, Estoril, Portugal. June 27 - July 2, 2010.
151. Zhang X., Zhang J., Zhu K. Y., Genome-wide analysis of chitin synthase and chitinase gene families in African malaria mosquito, *Anopheles gambiae*. A poster presented by XZ at the K-State 4<sup>th</sup> Annual Arthropod Genomics Symposium, Kansas City, MO. June 10-13, 2010.
152. Yao J., Khajuria C., Lu N., Buschman L. L., Oppert B., Chen M.-S., Zhu K. Y., Changes in gene expression in European corn borer (*Ostrinia nubilalis*) in responses to *Bacillus thuringiensis* Cry1Ab protoxin exposure. A poster presented by KYZ at the K-State 4<sup>th</sup> Annual Arthropod Genomics Symposium, Kansas City, MO. June 10-13, 2010.

153. Zhang X., Zhu K. Y., Functional analysis of two chitin synthase genes in African malaria mosquito, *Anopheles gambiae*. A poster presented by XZ at 15<sup>th</sup> K-State Research Forum, Kansas State University, Manhattan, KS. Apr. 2, 2010.
154. Yao J., Khajuria C., Buschman L. L., Chen M.-S., Oppert B., Zhu K. Y., Characterization of trypsin-like proteases in European corn borer (*Ostrinia nubilalis*). Presented by JY at 15<sup>th</sup> K-State Research Forum, Kansas State University, Manhattan, KS. Apr. 2, 2010.
155. Tucker A. M., Campbell J., Arthur F. A., Zhu K. Y., Potential *Tribolium castaneum* population effects due to the horizontal transfer of methoprene in microcosms. Presented by AMT at the 65<sup>th</sup> ESA North Central Branch Meeting in Louisville, KY. Mar. 14-17, 2010.
156. Yao J., Khajuria C., Buschman L. L., Lu N., Chen M.-S., Oppert B., Zhu K. Y., Changes in gene expression in European corn borer (*Ostrinia nubilalis*) in responses to *Bacillus thuringiensis* Cry1Ab protoxin exposure. A poster presented by JY at the 65<sup>th</sup> ESA North Central Branch Meeting in Louisville, KY. Mar. 14-17, 2010.
157. Khajuria C., Buschman L. L., Chen M.-S., Muthukrishnan S., Zhu K. Y., Functional analysis of a midgut-specific chitinase-like gene from the European corn borer (*Ostrinia nubilalis* Hübner) larvae. Presented by CK at the General Meeting of K-State Arthropod Genomics Center, Manhattan, KS. Jan. 23, 2010.
158. Zhang J., Zhang X., Zhu K. Y., Characterizations of chitinase gene family in *Anopheles gambiae*. A poster presented by KYZ at the Annual Meeting of the ESA, Indianapolis, IN. Dec. 13-16, 2009.
159. Yao J., Khajuria C., Buschman L. L., Chen M.-S., Zhu K. Y., Characterization of trypsin- and chymotrypsin-like cDNAs from the gut of European corn borer (*Ostrinia nubilalis*). A poster presented by JY at the Annual Meeting of the ESA, Indianapolis, IN. Dec. 13-16, 2009.
160. Zhu K. Y., Highlights of the year. Presented in the OCEA member symposium at the Annual Meeting of the ESA, Indianapolis, IN. Dec. 13-16, 2009.
161. Zhang X., Zhu K. Y., Functional analysis of two chitin synthase genes in African malaria mosquito, *Anopheles gambiae*. A poster presented by XZ at the Annual Meeting of the ESA, Indianapolis, IN. Dec. 13-16, 2009.
162. Khajuria C., Buschman L. L., Chen M.-S., Muthukrishnan S., Zhu K. Y., Functional analysis of a midgut-specific chitinase-like gene from the European corn borer (*Ostrinia nubilalis* Hübner) larvae. Presented by CK at the Annual Meeting of the ESA, Indianapolis, IN. Dec. 13-16, 2009.
163. Tucker A. M., Campbell J., Arthur F. A., Zhu K. Y., Horizontal transfer of methoprene by contact and/or cannibalization in *Tribolium castaneum*. Presented by AMT at the Annual Meeting of the ESA, Indianapolis, IN. Dec. 13-16, 2009.
164. Li X., Zhang X., Zhang J., Zhang X., Starkey S. R., Zhu K. Y., Eleven glutathione S-transferase genes from the aquatic midge (*Chironomus tentans*): Molecular characteristics, expression patterns and herbicide-mediated responses. A poster presented by KYZ at the K-State Ecological Genomics Symposium, Kansas City, MO. Nov. 13-15, 2009.
165. Brimijoin W. S., Polsinelli G., Gao Y., Singh S., Mishra R., Ekstrom F., Zhu K. Y., Pang Y.-P., Cysteine-reactive agents target insect acetylcholinesterase – potential for species-selective pesticides. Presented by WSB at the 10th International Meeting on Cholinesterases, Šibenik, Croatia. Sep. 20-25, 2009.
166. Zhu K. Y., Insect acetylcholinesterase: Roles in insecticide resistance and new prospects as an insecticide target. Organic Group Seminars, Department of Chemistry, Kansas State University, Manhattan, KS. Sep. 18, 2009 (INVITED).
167. Zhu K. Y., Insect acetylcholinesterase: Roles in insecticide resistance and new prospects as an insecticide target. International Insect Science Symposium/Advanced Summer Training Course of Entomological Theory and Method, Institute of Zoology, Beijing, China. July 25-30, 2009 (INVITED).

168. Zhu K. Y., RNA interference and its prospects for insect pest management. International Insect Science Symposium/Advanced Summer Training Course of Entomological Theory and Method, Institute of Zoology, Beijing, China. July 25-30, 2009 (**INVITED**).
169. Zhang D.-D., Zhu K. Y., Wang C.-Z., Cloning and characterization of six candidate pheromone receptor genes of sibling species, *Helicoverpa armigera* and *Helicoverpa assulta*. Presented by DDZ at the Second International Symposium on Insect Physiology, Biochemistry and Molecular Biology, Chengde, Hebei Province, China. July 19-22, 2009.
170. Ma E.-B., Zhu K. Y., Zhang J.-Z., Guo Y.-P., Yang M.-L., Zhang J.-Q., Guo Y.-Q., Biochemical and genomic approaches to identifying and characterizing metabolic detoxification genes responsible for insecticide resistance in oriental migratory locust, *Locusta migratoria manilensis* (Meyen). Presented by JZZ at the Second International Symposium on Insect Physiology, Biochemistry and Molecular Biology, Chengde, Hebei Province, China. July 19-22, 2009 (**INVITED**).
171. Zhang J.-Z., Zhang X., Zhu K. Y., Genome-wide search and characterizations of chitin synthase and chitinase gene families in *Anopheles gambiae*. Presented by KYZ at the Second International Symposium on Insect Physiology, Biochemistry and Molecular Biology, Chengde, Hebei Province, China. July 19-22, 2009 (**INVITED**).
172. Zhu K. Y., RNA interference and its prospects for insect pest management. Research Institute of Applied Biology, Shanxi University, Taiyuan, China. July 13, 2009 (**INVITED**).
173. Zhu K. Y., Insect acetylcholinesterase: Roles in insecticide resistance and new prospects as an insecticide target. Institute of Pesticide and Environmental Toxicology, Zhejiang University, Hangzhou, China. July 6, 2009 (**INVITED**).
174. Zhu K. Y., Genome-wide search and characterizations of chitin synthase and chitinase gene families in *Anopheles gambiae*. Presented by KYZ. Institute of Insect Sciences, Zhejiang University, Hangzhou, China. July 3, 2009 (**INVITED**).
175. Zhang X., Zhang J., Zhu K. Y., Molecular properties and expression patterns of two chitin synthases in African malaria mosquito (*Anopheles gambiae*). A poster presented by XZ at the K-State 3<sup>rd</sup> Annual Arthropod Genomics Symposium in Kansas City, MO. June 11-14, 2009.
176. Yao J., Khajuria C., Buschman L. L., Chen M.-S., Zhu K. Y., Characterization of trypsin- and chymotrypsin-like cDNAs from the gut of European corn borer (*Ostrinia nubilalis*). A poster presented by JY at the K-State 3<sup>rd</sup> Annual Arthropod Genomics Symposium in Kansas City, MO. June 11-14, 2009.
177. Lu Y. Park Y. Gao X., Zhu K. Y., Expression and functional analysis of two acetylcholinesterase genes in red flour beetle (*Tribolium castaneum*). A poster presented by YL at the K-State 3<sup>rd</sup> Annual Arthropod Genomics Symposium in Kansas City, MO. June 11-14, 2009.
178. Khajuria C., Buschman L. L., Chen M.-S., Siegfried B. D., Coates B. S., Sumerford D. V., Zhu K. Y., A novel aminopeptidase-like gene possibly involved in Cry1Ab toxicity and/or resistance in European corn borer (*Ostrinia nubilalis*). A poster presented by CK at the K-State 3<sup>rd</sup> Annual Arthropod Genomics Symposium in Kansas City, MO. June 11-14, 2009.
179. Zhang X., Li X., Zhang J., Starkey S. R., Zhu K. Y., Transcriptome analysis of the aquatic midge (*Chironomus tentans*): A step toward toxicogenomics. Presented by XZ at the Ecological Genomics Research Forum, Kansas State University, Manhattan, KS. May 20, 2009.
180. Zhang X., Zhang J., Zhu K. Y., Expression patterns and functional analysis of two chitin synthase genes in African malaria mosquito (*Anopheles gambiae*). A poster presented by XZ at the 85<sup>th</sup> Annual Meeting of the Kansas (Central States) Entomological Society, Manhattan, KS. Apr. 25, 2009.
181. Zhang J., Zhang X., Zhu K. Y., Genome-wide search and characterization of chitinase gene family in African malaria mosquito (*Anopheles gambiae*). A poster presented by JZ at the 85<sup>th</sup> Annual Meeting of the Kansas (Central States) Entomological Society, Manhattan, KS. Apr. 25, 2009.

182. Yao J., Khajuria C., Buschman L. L., Chen M.-S., Zhu K. Y. Characterization of trypsin- and chymotrypsin-like cDNAs from the gut of European corn borer. A poster presented by JY at the 85<sup>th</sup> Annual Meeting of the Kansas (Central States) Entomological Society, Manhattan, KS. Apr. 25, 2009.
183. Tucker A. M., Campbell J., Arthur F. A., Zhu K. Y., Horizontal transfer of methoprene among *Tribolium castaneum* via substrate contamination. Presented by AMT at the 85<sup>th</sup> Annual Meeting of the Kansas (Central States) Entomological Society, Manhattan, KS. Apr. 25, 2009.
184. Khajuria C., Buschman L. L., Chen M.-S., Muthukrishnan S., Zhu K. Y., Functional analysis of a midgut-specific chitinase-like gene from the European corn borer (*Ostrinia nubilalis*) larvae. Presented by CK at the 85<sup>th</sup> Annual Meeting of the Kansas (Central States) Entomological Society, Manhattan, KS. Apr. 25, 2009.
185. Zhu K. Y., Transcriptome analysis of the aquatic midge (*Chironomus tentans*): A step toward toxicogenomics. Presented in the “Applying Proteomic and Genomic Methodology to Pest Insect Control” symposium at the 64<sup>th</sup> ESA North Central Branch Meeting, St. Louis, MO. Mar. 15-18, 2009 (**INVITED**).
186. Tucker A. M., Campbell J., Arthur F. A., Zhu K. Y., Horizontal transfer of methoprene through cannibalization by *Tribolium castaneum*. Presented by AMT at the 64<sup>th</sup> ESA North Central Branch Meeting, St. Louis, MO. Mar. 15-18, 2009.
187. Zhu K. Y., RNA interference and its prospects in insect pest management. Institute of Insect Sciences, Zhejiang University, China. Jan. 10, 2009 (**INVITED**).
188. Zhu K. Y., RNA interference and its prospects in insect pest management. Institute of Zoology, Chinese Academy of Sciences, Beijing, China. Dec. 30, 2008 (**INVITED**).
189. Zhu K. Y., Progress in research collaboration. Review Meeting of the CAS Innovation Project on Animal Behavioral Ecology. Institute of Zoology, Chinese Academy of Sciences, Beijing, China. Dec. 29, 2008 (**INVITED**).
190. Zhu K. Y., Research in insect molecular toxicology at Kansas State University. Laboratory of Insect Behavioral Physiology and Biochemistry, Institute of Zoology, Chinese Academy of Sciences, Beijing, China. Dec. 26, 2008 (**INVITED**).
191. Zhu K. Y., Li X.-W., Starkey S. R., Analysis and functional annotation of expressed sequence tags from the aquatic midge (*Chironomus tentans*). A poster presented by KYZ at the Annual Meeting of the ESA, Reno, NV. Nov. 16-19, 2008.
192. Zhang J., Zhang X., Zhu K. Y., Genome-wide search and characterization of chitinase gene family in African malaria mosquito (*Anopheles gambiae*). A poster presented by JZ at the Annual Meeting of the ESA, Reno, NV. Nov. 16-19, 2008.
193. Zhu K. Y., Zhang J., Zhang X., Molecular biology of chitin metabolic enzymes in mosquitoes. Presented by KYZ in the “Frontiers in Molecular Insect Science” symposium at the Annual Meeting of the ESA, Reno, NV. Nov. 16-19, 2008 (**INVITED**).
194. Zhang X., Zhang J., Zhu K. Y., Expression patterns and functional analysis of two chitin synthase genes in African malaria mosquito (*Anopheles gambiae*). A poster presented by XZ at the Annual Meeting of the ESA, Reno, NV. Nov. 16-19, 2008.
195. Zhu K. Y., Li X.-W., Starkey S. R., Analysis and functional annotation of expressed sequence tags from the aquatic midge (*Chironomus tentans*). A poster presented by KYZ at the K-State Ecological Genomics Symposium, Kansas City, MO. Nov. 14-16, 2008.
196. Zhu K. Y., Li X.-W., Zhang X., Khajuria C., Starkey S. R., Analysis and functional annotation of expressed sequence tags from the aquatic midge (*Chironomus tentans*). The Arthropod Genomics Center Poster Session, Kansas State University, Manhattan, KS. Oct. 3, 2008.
197. Zhang J., Zhu K. Y., Characterization of a chitin synthase cDNA and its increased mRNA level associated with decreased chitin synthesis in *Anopheles quadrimaculatus* exposed to diflubenzuron. The Arthropod Genomics Center Poster Session, Kansas State University, Manhattan, KS. Oct. 3, 2008.

198. Khajuria C., Zhu Y. C., Chen M.-S., Buschman L. L., Muthukrishnan S., Zhu K. Y., Analysis of expressed sequence tags (ESTs) from the gut of the European corn borer (*Ostrinia nubilalis* Hübner). The Arthropod Genomics Center Poster Session, Kansas State University, Manhattan, KS. Oct. 3, 2008.
199. Zhu, K. Y., Research in molecular toxicology. Entomology Department Research Blitz Part I. Kansas State University, Manhattan, KS. Oct. 3, 2008.
200. Zhu K. Y., Analysis and functional annotation of expressed sequence tags from the aquatic midge (*Chironomus tentans*). Annual meeting of the W1045 Technical Committee, Kona, HI. June 6-8, 2008.
201. Zhu K. Y., Analysis and functional annotation of expressed sequence tags from the aquatic midge (*Chironomus tentans*). The Ecological Genomics Research Forum, Kansas State University, Manhattan, KS. May 31, 2008.
202. Zhu K. Y., Li X.-W., Zhang X. Khajuria C., Starkey S. R., Analysis and functional annotation of expressed sequence tags from the aquatic midge (*Chironomus tentans*). A poster presented by KYZ at the K-State 2nd Annual Arthropod Genomics Symposium in Kansas City, MO. April 11-13, 2008.
203. Khajuria C., Zhu Y. C., Chen M.-S., Buschman L. L., Muthukrishnan S., Zhu K. Y., Functional annotation of expressed sequence tags from the gut of European corn borer (*Ostrinia nubilalis* Hübner). A poster presented by CK at the K-State 2<sup>nd</sup> Annual Arthropod Genomics Symposium in Kansas City, MO. April 11-13, 2008.
204. Khajuria C., Buschman L. L., Chen M.-S., Zhu K. Y., Muthukrishnan S., Zhu Y. C., Analysis and annotation of gut-specific transcriptomes from the European corn borer (*Ostrinia nubilalis*) larvae. Presented by CK in Genetics and Genomics of Agronomic Pests: From Populations to Individuals to Genes symposium at the ESA North Central Branch Meeting, Columbus, OH. Mar. 24-27, 2008 **(INVITED)**.
205. Sutton A. E., Arthur F. H., Campbell J. F., Zhu K. Y., Comparative residual efficacies of aerosol insecticides against two *Tribolium* species. Presented by AES at the ESA North Central Branch Meeting, Columbus, OH. Mar. 24-27, 2008.
206. Khajuria C., Zhu Y. C., Buschman L. L., Chen M.-S., Zhu K. Y., Identification and expression profiles of thirteen glutathione S-transferase genes from the European corn borer. Presented by CK at the ESA North Central Branch Meeting, Columbus, OH. Mar. 24-27, 2008.
207. Khajuria C., Zhu Y. C., Chen M.-S., Buschman L. L., Muthukrishnan S., Zhu K. Y., Analysis of expressed sequence tags (ESTs) from the gut of the European corn borer (*Ostrinia nubilalis* Hübner). A poster presented by CK at the K-State Graduate Student Council's Research Forum. Mar. 7, 2008.
208. Zhu K. Y., Insect acetylcholinesterase: An old enzyme gives new challenges and prospects. Zhejiang University, Hangzhou, China. Jan. 6, 2008 **(INVITED)**.
209. Zhu K. Y., Insect acetylcholinesterase: An old enzyme gives new challenges and prospects. Shanxi University, Taiyuan, China. Dec. 27, 2007 **(INVITED)**.
210. Zhu K. Y., Chitin biosynthetic system as a selective target for insect pest management. Institute of Zoology, Chinese Academy of Sciences, Beijing, China. Dec. 21, 2007 **(INVITED)**.
211. Zhu K. Y., Insect acetylcholinesterase: An old enzyme gives new challenges and prospects. Institute of Zoology, Chinese Academy of Sciences, Beijing, China. Dec. 19, 2007 **(INVITED)**.
212. Zhu K. Y. Insect acetylcholinesterase: An old enzyme gives new challenges and prospects. China Agricultural University, Beijing, China. Dec. 15, 2007 **(INVITED)**.
213. Starkus L., Zhu K. Y., Chen M.-S., Liu X., Huang L., Smith C. M., Virus-induced gene silencing to identify *Diuraphis noxia* (Mordvilko) resistance genes in wheat. A poster presented by LS at the Annual Meeting of the ESA, San Diego, CA. Dec. 9-12, 2007.



214. Ananthkrishnan R., Smith C. M., Chen M.-S., Zhu K. Y., Anderson J. M., Comparative gut transcriptome analysis of Biotype 1 and 2 Russian wheat aphid, *Diuraphis noxia* (Mordvilko). A poster presented by RA at the Annual Meeting of the ESA, San Diego, CA. Dec. 9-12, 2007.
215. Zhang J., Zhu K. Y., Characterization of a chitin synthase cDNA and its increased mRNA level associated with decreased chitin synthesis in *Anopheles quadrimaculatus* exposed to diflubenzuron. A poster presented by KYZ at the Annual Meeting of the ESA, San Diego, CA. Dec. 9-12, 2007.
216. Khajuria C., Zhu Y. C., Chen M.-S., Buschman L. L., Muthukrishnan S., Zhu K. Y., Analysis of expressed sequence tags (ESTs) from the gut of the European corn borer (*Ostrinia nubilalis* Hübner). A poster presented by CK at the Annual Meeting of the ESA, San Diego, CA. Dec. 9-12, 2007.
217. Oppert B., Li H., Buschman L. L., Zhu, K. Y., Bt proteolysis in plants: Impact on Bt resistance management. Presented by BO at the symposium of Advances in *Bt* Resistance: From Mechanisms to Monitoring, the Annual Meeting of the ESA, San Diego, CA. Dec. 9-12, 2007 (**INVITED**).
218. Sutton A. E., Arthur F. H., Campbell J. F., Zhu K. Y., Evaluation of efficacy and residue degradation of aerosol insecticide applications as alternative to methyl bromide. Presented by AES at the Annual Research and Extension Update, Department of Entomology, KSU, Manhattan, KS. Nov. 27-28, 2007.
219. Zhu K. Y., Khajuria C., Starkey S. R., Analysis of expressed sequence tags from the aquatic midge (*Chironomus tentans*). A poster presented by KYZ at the K-State Ecological Genomics Symposium, Kansas City, MO. Nov. 9-12, 2007.
220. Yang M. L., Zhang J. Z., Zhu K. Y., Xuan T., Liu X. J., Guo Y. P., Ma E. B., Mechanisms for organophosphate resistance in a field population of oriental migratory locust, *Locusta migratoria manilensis* (Meyen). Presented by EBM at the International Symposium on Insect Physiology, Biochemistry and Molecular Biology, Jinan, China. Sep. 19-22, 2007.
221. Zhu K. Y., Insect acetylcholinesterase: An old enzyme gives new challenges and prospects. Mayo Clinic College of Medicine, Rochester, MN. Sep. 7, 2007 (**INVITED**).
222. Zhu K. Y., Transcriptional response to environmental stressors in the aquatic midge (*Chironomus tentans*). Presented by KYZ at the Ecological Genomics Research Forum, Kansas State University, Manhattan, KS. Jun. 19, 2007.
223. Marshall J., Zhu K. Y., Pyrosequencing cDNA-AFLPS: A novel approach for ecological and evolutionary genomics. Presented by JM at the Ecological Genomics Research Forum, Kansas State University, Manhattan, KS. Jun. 19, 2007.
224. Zhu K. Y., Herbicide-mediated changes of hemoglobin gene regulation and oxygen consumption in an aquatic insect: A novel mechanism of adverse effect of environmental pesticides. Annual meeting of the W1045 Technical Committee, Gainesville, FL. June 3-5, 2007.
225. Ananthkrishnan R., Chen M.-S., Zhu K. Y., Smith C. M., A partial cDNA library from gut tissues of the Russian wheat aphid, *Diuraphis noxia* (Mordvilko). Presented by RA at the 1<sup>st</sup> Annual Arthropod Genomics Symposium, Kansas State University, Manhattan, KS. Apr. 20, 2007.
226. Khajuria C., Buschman L. L., Chen M.-S., Zhu K. Y., Muthukrishnan S., Zhu Y.-C., Developing an insect gut-specific DNA microarray to study insect and Bt toxin interactions. Presented by KYZ at the 1<sup>st</sup> Annual Arthropod Genomics Symposium, Kansas State University, Manhattan, KS. Apr. 20, 2007 (**INVITED**).
227. Anderson T. D., Zhu K. Y., Herbicide-induced hypoxic stress and hemoglobin gene regulation in an aquatic insect. Presented by TDA at the Young Scientists Recognition Award Symposium, the 233rd American Chemical Society National Meeting, Chicago, IL. Mar. 25-29, 2007 (**INVITED**).
228. Khajuria C., Zhu Y.-C., Chen M., Buschman L. L., Zhu K. Y., Analysis of expressed sequence tags (ESTs) from the gut of the European corn borer (*Ostrinia nubilalis* Hübner). A poster presented by CK at the ESA North Central Branch and the Entomological Society of Manitoba Joint Meeting, Winnipeg, Manitoba, Canada. Mar. 25-28, 2007.

229. Khajuria C., Zhu Y.-C., Chen M., Buschman L. L., Zhu K. Y., Analysis of expressed sequence tags (ESTs) from the gut of the European corn borer (*Ostrinia nubilalis* Hübner). A poster presented by CK at the K-State Graduate Student Council's Research Forum, Manhattan, KS. Mar. 2, 2007.
230. Zhu K. Y. Research progress in insecticide toxicology. Entomology Seminar, Department of Entomology, Kansas State University, Manhattan, KS. Sep. 29, 2006 (INVITED).
231. Anderson T. D., Jin-Clark Y., Begum K., Zhu K. Y., Atrazine-induced hypoxic stress and regulation of hemoglobin genes in larvae of the aquatic midge, *Chironomus tentans* (Diptera: Chironomidae). A poster presented by TDA at the American Chemical Society 232nd National Meeting, San Francisco, CA. Sep. 10-14, 2006.
232. Zhu K. Y., Anderson T. D., Jin-Clark Y., Mechanisms of herbicide-mediated toxic effects on an aquatic insect. Presented by KYZ at Federal University of Viçosa, Viçosa, MG, Brazil. Aug. 14, 2006 (INVITED).
233. Zhu K. Y., Chitin biosynthetic system as a selective target for insect pest management. Presented by KYZ at the Round-Table of the International Resistance Action Committee (IRAC)-Brazilian Section on "Mode of Action and Physiological Basis of Insecticide Selectivity" at XXI Brazilian Congress of Entomology, Recife, Brazil. Aug. 10, 2006 (INVITED).
234. Heise S., Zhu K. Y., Effect of diflubenzuron on chitin synthesis in different stages and body parts of the common malaria mosquito (*Anopheles quadrimaculatus*). A poster presented by SH at K-State College of Veterinary Medicine, Manhattan, KS Aug. 8, 2006.
235. Heise S., Zhu K. Y., Effect of diflubenzuron on chitin synthesis in different stages and body parts of the common malaria mosquito (*Anopheles quadrimaculatus*). A poster presented by SH at the 2006 Merck/Merial National Veterinary Scholars Symposium: Greating the Gumbo of Progress, Baton Rouge, LA. Aug. 3-6, 2006.
236. Anderson T. D., Jin-Clark Y., Begum K., Zhu K. Y., Atrazine-induced hypoxic stress and hemoglobin regulation in larvae of the aquatic midge *Chironomus tentans* (Diptera: Chironomidae). A poster presented by KYZ at XXI Brazilian Congress of Entomology, Recife, Brazil. Aug. 6-11, 2006.
237. Zhu K. Y., Zhang J., Chitin biosynthetic system as a selective target for insect pest management. Presented by KYZ at Shanxi University, Taiyuan, China. July 29, 2006 (INVITED).
238. Zhu K. Y., Anderson T. D., Jin-Clark Y., Mechanisms of triazine herbicide-induced adverse effects on a nontarget insect. Presented by KYZ at Shanxi University, Taiyuan, China. July 27, 2006 (INVITED).
239. Zhu K. Y., Anderson T. D., Jin-Clark Y., Mechanisms of triazine herbicide-induced adverse effects on a nontarget insect. Presented by KYZ at China Jiliang University, Hangzhou, China. July 25, 2006 (INVITED).
240. Zhu K. Y., Sublethal Effects of three pesticides on activities of selected target and detoxification enzymes in the aquatic midge, *Chironomus tentans* (Diptera: Chironomidae). Annual meeting of the W1045 Technical Committee, Ithaca, NY. June 4-6, 2006.
241. Anderson T. D., Zhu K. Y., Atrazine induces hypoxic stress and down-regulates hemoglobin gene expression in larvae of the aquatic midge, *Chironomus tentans* (Diptera: Chironomidae). A poster presented by TDA at the K-State Graduate Student Council's Research Forum, Manhattan, KS. Mar. 3, 2006.
242. Anderson T. D., Zhu K. Y., Effects of atrazine on insecticide toxicity and gene expression in the aquatic midge, *Chironomus tentans* (Diptera: Chironomidae). A poster presented by TDA at the Annual Meeting of the ESA, Fort Lauderdale, FL. Dec. 15-18, 2005.
243. Anderson T. D., Zhu K. Y., Atrazine induces hypoxic stress and down-regulates hemoglobin gene expression in larvae of the aquatic midge, *Chironomus tentans* (Diptera: Chironomidae). A poster presented by TDA at the Annual Meeting of the ESA, Fort Lauderdale, FL. Dec. 15-18, 2005.

244. Zhu K. Y., Anderson T. D., Jin-Clark Y., Effect of pesticides on an aquatic insect: Biochemical and molecular responses. Presented by KYZ at the Environmental Toxicology Seminar Series, University of California, Riverside, CA, Dec. 8, 2005 (**INVITED**).
245. Zhu K. Y., Effect of pesticides on non-target organisms: Toxicogenomics approaches. Annual meeting of the W45 Technical Committee, Tahoe, NV. June 5-7, 2005.
246. Zhu K. Y., Anderson T. D., Jin-Clark Y., Environmental pesticide mixtures: Synergism or antagonism? Presented by KYZ in the Department of Entomology and Plant Pathology, Oklahoma State University, Stillwater, OK, Apr. 13, 2005 (**INVITED**).
247. Harrill J. A., Wolansky M., Zhu K. Y., Hester S., Crofton K. M., Using array technology to identify potential biomarkers for pyrethroid insecticides. Presented by JAH at the 44<sup>th</sup> Annual Meeting of the Society of Toxicology, New Orleans, LA, Mar. 6-10, 2005.
248. Zhu K. Y., Mechanism of epithelial chitin synthesis inhibition in mosquitoes. Chitin-Phenoloxidase Group Meeting, Department of Biochemistry, Kansas State University, Manhattan, Mar. 4, 2005.
249. Zhu K. Y. Mechanism of epithelial chitin synthesis inhibition in mosquitoes. KSU-NIH COBRE Program, Department of Anatomy and Physiology, Kansas State University, Manhattan, Feb. 25, 2005.
250. Ahmad A., Wilde G. E., Zhu K. Y., Detectability of coleopteran-specific Cry3Bb1 protein in soil and its effect on nontarget below-ground arthropods. A poster presented by GEW at the 11<sup>th</sup> *Diabrotica* Subgroup Meeting (10<sup>th</sup> EPPO *Ad Hoc* Panel and FAO Network Group), Bratislava, Slovak Republic. Feb. 14-17, 2005.
251. Anderson T. D., Rakotondravelo M. L., Zhu K. Y., Effects of atrazine on insecticide toxicity and gene expression in the aquatic midge, *Chironomus tentans* (Diptera: Chironomidae). Presented by TDA at the USDA-CSREES National Water Quality Conference, San Diego, Feb. 6-10, 2005.
252. Zhu K. Y., Anderson T. D., Jin-Clark Y., Environmental pesticide mixtures: Synergism or antagonism? Presented by KYZ at the Center for Plant Health Science and Technology, USDA/APHIS, Raleigh, NC. Dec. 2, 2004 (**INVITED**).
253. Mahroof R. M., Zhu K. Y., Neven L. G., Subramanyam Bh., Bai J., Variation in expression patterns of *hsp 70* genes in *Tribolium castaneum* developmental stages. Presented by MRM at the Fourth Annual Meeting of the Consortium for Integrated Management of Stored Product Insect Pests (CIMSPIP). Salt Lake City, UT, Nov. 12-13, 2004.
254. Zhu K. Y., Role of esterases in insect resistance to insecticides. Presented at the symposium in honor of John M. Clark for the International Award for Research in Agrochemicals at the 228<sup>th</sup> American Chemical Society National Meeting, Philadelphia, PA. Aug. 22-26, 2004 (**INVITED**).
255. Mahroof R. M., Subramanyam Bh., Zhu K. Y., Relative susceptibility of *Tribolium castaneum* (Herbst) exposed to elevated temperatures. Presented by MRM at the 75<sup>th</sup> Annual Meeting of the Rocky Mountain Conference of Entomologists, Colorado Springs, CO. Aug. 1-5, 2004.
256. Ma E.-B., He Y.-P., Zhu K. Y., Characterization of acetylcholinesterase purified from two field populations of *Locusta migratoria manilensis* (Meyen) (Orthoptera: Acridoidea). Presented by EBM at the 15<sup>th</sup> International Plant Protection Congress, Beijing, China. May 11-16, 2004.
257. He Y.-P., Ma E.-B., Zhu K. Y., Comparative studies on general esterases in two field populations of oriental migratory locust *Locusta migratoria manilensis* (Meyen). Presented by YPH at the 15<sup>th</sup> International Plant Protection Congress, Beijing, China. May 11-16, 2004.
258. Mahroof R. M., Zhu K. Y., Subramanyam Bh., The influence of heat shock protein, HSP 70 on the heat tolerance of *Tribolium castaneum* (Herbst) life stages. A poster presented by MRM at the 136<sup>th</sup> Kansas Academy of Science Annual Meeting, Kansas City, MO. Apr. 16-17, 2004.
259. Li H., Higgins R. A., Buschman L. L., Zhu K. Y., Huang F., Oppert B., Transgenic corn controls insects resistant to *Bacillus thuringiensis* toxins. A poster presented by HL at the 136<sup>th</sup> Kansas Academy of Science Annual Meeting, Kansas City, MO. Apr. 16-17, 2004.

260. Mahroof R. M., Zhu K. Y., Subramanyam Bh., Stage-specific variations in expression of heat shock proteins in *Tribolium castaneum* exposed to elevated temperatures. Presented by RMM at the 9<sup>th</sup> Annual Kansas State University Graduate Research Forum, Manhattan, KS. Apr. 16, 2004.
261. Mahroof R. M., Zhu K. Y., Subramanyam Bh., The influence of heat shock protein, HSP 70 on the heat tolerance of *Tribolium castaneum* (Herbst) life stages. A poster presented by MRM at the 59<sup>th</sup> ESA North Central Branch Annual Meeting, Kansas City, MO. Mar. 28-31, 2004.
262. Li H., Oppert B., Higgins R. A., Buschman L. L., Zhu K. Y., Huang F., Reduced trypsin-like proteinase activity is the major mechanism of resistance to Cry1Ab in a Dipel-resistant European corn borer strain. Presented by HL at the 59<sup>th</sup> ESA North Central Branch Annual Meeting, Kansas City, MO. Mar. 28-31, 2004.
263. Anderson T. D., Zhu K. Y., Gene expression profiling of atrazine-treated *Chironomus tentans* using restriction fragment differential display-PCR (RFDD-PCR). Presented by TDA at the 59<sup>th</sup> ESA North Central Branch Annual Meeting, Kansas City, MO. Mar. 28-31, 2004.
264. Ahmad A., Wilde G. E., Zhu K. Y., Coleoptera-specific Cry3Bb1 toxin has no adverse effect on earthworms exposed to soil containing corn roots or biomass. A poster presented by AA at the 59<sup>th</sup> ESA North Central Branch Annual Meeting, Kansas City, MO. Mar. 28-31, 2004.
265. Zhu K. Y., Insecticide resistance: Occurrence, mechanism, and detection. Institute of Zoology, Chinese Academy of Sciences, Beijing, China. Mar. 16, 2004 (**INVITED**).
266. Zhu K. Y., Insecticide resistance: Occurrence, mechanism, and detection. College of Agriculture and Biotechnology, Zhejiang University, Hangzhou, China. Nov. 24, 2003 (**INVITED**).
267. Mahroof R. M., Zhu K. Y., Subramanyam Bh., Variation in thermotolerance levels in *Tribolium castaneum* life stages and role of heat shock proteins in thermotolerance. Presented by MRM at the Third Annual Meeting of the Consortium for Integrated Management of Stored Product Insect Pests (CIMSPIP), USDA-ARS, Manhattan, KS. Nov. 20-21, 2003.
268. Zhu K. Y., Biochemical and molecular basis of insect-pesticide interactions. College of Life Science and Technology, Shanxi University, Taiyuan, China. Nov. 17, 2003 (**INVITED**).
269. Zhu K. Y., Biochemical and molecular basis of insect-pesticide interactions. Division of Neurotoxicology, the U.S. EPA National Health and Environmental Effects Research Laboratory, Research Triangle Park, NC. Oct. 30, 2003 (**INVITED**).
270. Zhu K. Y., Anderson T. D., Starkey S. R., Comparative studies on effects of three chitin synthesis inhibitors on common malaria mosquito (*Anopheles quadrimaculatus*) larvae. A poster presented by KYZ at the Annual Meeting of the ESA, Cincinnati, OH. Oct. 26-29, 2003.
271. Anderson T. D., Zhu K. Y., Gene expression profiling of atrazine-treated *Chironomus tentans* (Diptera: Chironomidae) using restriction fragment differential display-PCR. A poster presented by TDA at the Annual Meeting of the ESA, Cincinnati, OH. Oct. 26-29, 2003.
272. Rakotondravelo M. L., Charlton R. E., Zhu K. Y., Sublethal effects of two insecticides on the aquatic midge *Chironomus tentans* (Diptera: Chironomidae). A poster presented by MLR at the Annual Meeting of the ESA, Cincinnati, OH. Oct. 26-29, 2003.
273. Li H., Oppert B., Zhu K. Y., Higgins R. A., Buschman L. L., Huang F., Molecular mechanisms of reduced proteinase activity in European corn borer larvae resistant to *Bacillus thuringiensis* endotoxins. A poster presented by HL at the Annual Meeting of the ESA, Cincinnati, OH. Oct. 26-29, 2003.
274. Mahroof R. M., Zhu K. Y., Subramanyam B., Stage-specific variations in expression of heat shock proteins in *Tribolium castaneum* (Coleoptera: Tenebrionidae) exposed to different temperatures. A poster presented by RMM at the Annual Meeting of the ESA, Cincinnati, OH. Oct. 26-29, 2003.
275. Mohandass S., Arthur F., Zhu K. Y., Throne J. E., The effects of hydroprene on the development and mortality of eggs of Indian meal moth, *Plodia interpunctella* (Lepidoptera: Pyreliidae). Presented by SM at the Annual Meeting of the ESA, Cincinnati, OH. Oct. 26-29, 2003.
276. Zhu K. Y., Starkey S. R., Evaluation of general esterase activity in cat fleas. Presented by KYZ at the Hartz Mountain Corporation, Bloomfield, NJ. Sep. 25, 2003 (**INVITED**).

277. Zhu K. Y. Insecticide resistance: Occurrence, mechanism, and detection. The Hartz Mountain Corporation, Bloomfield, NJ. Sep. 25, 2003 (**INVITED**).
278. Mahroof R., Zhu K. Y., Subramanyam B., Susceptibility of red flour beetle life stages to elevated temperatures. Presented by RM at the Fourth K-State Heat Treatment Workshop. Kansas State University, Manhattan, KS. Aug. 5-7, 2003.
279. Li H., Gonzalez-Cabrera J., Oppert B., Ferré J., Higgins R. A., Buschman L. L., Zhu K. Y., Huang F., Resistance to *Bacillus thuringiensis* endotoxins in the European corn borer. A poster presented by HL at the 79<sup>th</sup> Annual Meeting of the Kansas (Central States) Entomological Society, Manhattan, KS. Apr. 19, 2003.
280. Rakotondravelo M., Charlton R. E., Zhu K. Y., Sublethal effects of two insecticides on the aquatic midge *Chironomus tentans* (Diptera: Chironomidae). A poster presented by MR at the 79<sup>th</sup> Annual Meeting of the Kansas (Central States) Entomological Society, Manhattan, KS. Apr. 19, 2003.
281. Li H., Gonzalez-Cabrera J., Oppert B., Ferré J., Higgins R. A., Buschman L. L., Zhu K. Y., Huang F., Resistance to *Bacillus thuringiensis* endotoxins in the European corn borer. A poster presented by HL at the Kansas Academy of Science 135th Annual Meeting, Pittsburg, KS. Apr. 11-12, 2003.
282. Wilde G., Whitworth J., Sloderbeck P., Zhu K. Y., Higgins R., Corn rootworm areawide management using semiochemical bait insecticides in Kansas: What we learned. Presented by GW in the Areawide Management of Corn Rootworm Symposium at the ESA North Central Branch Annual Meeting, Madison, WI. Mar. 23-26, 2003 (**INVITED**).
283. Hopper J. A., Wilde G. E., Zhu K. Y., Baseline toxicity for sunflower labeled insecticides to control sunflower moth *Homoeosoma electellum* (Hulst) (Lepidoptera: Pyralidae). A poster presented by JAH at the ESA North Central Branch Annual Meeting, Madison, WI. Mar. 23-26, 2003.
284. Li H., Gonzalez-Cabrera J., Ferré J., Oppert B., Higgins R. A., Buschman L. L., Zhu K. Y., Huang F., Comparison of Cry toxin binding to brush border membranes in *Bacillus thuringiensis*-resistant and -susceptible European corn borer. A poster presented by HL at the ESA North Central Branch Annual Meeting, Madison, WI. Mar. 23-26, 2003.
285. Hopper J. A., Wilde G. E., Zhu K. Y., Toxicity baselines for insecticides labeled to control *Homoeosoma electellum* (Hulst) (Lepidoptera: Pyralidae) on sunflowers. A poster presented by JAH at the 25<sup>th</sup> Sunflower Research Forum of the National Sunflower Association, Fargo, ND. Jan. 16-17, 2003.
286. Anderson T. D., Zhu K. Y., Atrazine-mediated alterations of gene expression in *Chironomus tentans* (Diptera: Chironomidae). Platform presentation by TDA at the SETAC North America 23<sup>rd</sup> Annual Meeting, Salt Lake City, UT. Nov. 16-20, 2002.
287. Li H., Oppert B., Higgins R. A., Huang F., Buschman L. L., Zhu K. Y., Gut proteinase activities and Bt-toxin binding to brush border membrane vesicles of Bt-resistant and -susceptible European corn borer. A poster presented by HL at the Annual Meeting of the ESA, Fort Lauderdale, FL. Nov. 17-20, 2002.
288. Anderson T. D., Rakotondravelo M., Zhu K. Y., Joint acute toxicity of atrazine and four organophosphate insecticides to *Chironomus tentans* (Diptera: Chironomidae). A poster presented at the Annual Meeting of the ESA, Fort Lauderdale, FL. Nov. 17-20, 2002.
289. Hartzler K. L., Fabrick J. A., Zhu K. Y., Baker J. E., Braconid venom: Biochemical effects on immune system in larvae of a pyralid moth. A poster presented by KLH at the Annual Meeting of the ESA, Fort Lauderdale, FL. Nov. 17-20, 2002.
290. Zhu K. Y., A new insecticide resistance mechanism in the greenbug (*Schizaphis graminum*). Entomology Research/Extension Session. Department of Entomology, KSU, Manhattan, KS. Nov. 12, 2002.
291. Mohandass S., Arthur F. H., Zhu K. Y., Modeling the population dynamics and effects of (*S*)-hydroprene on the critical life history parameters of Indianmeal moth. Presented by SM at the First Annual Meeting of the Consortium for Integrated Management of Stored Product Insect Pests, West Lafayette, IN. Oct. 28-29, 2002.

292. Mahroof R. M., Zhu K. Y., Subramanyam Bh., Do heat shock proteins mediate heat tolerance in *Tribolium castaneum*? Presented by RMM at the First Annual Meeting of the Consortium for Integrated Management of Stored Product Insect Pests, West Lafayette, IN. Oct. 28-29, 2002.
293. Zhu K. Y., Molecular basis of insect-pesticide interactions. Entomology Seminar, Department of Entomology, University of Missouri, Columbia, MO. May 3, 2002 (**INVITED**).
294. Gao J.-R., Zhu K. Y., Biochemical and molecular analyses of acetylcholinesterase conferring organophosphate resistance in the greenbug, *Schizaphis graminum* (Homoptera: Aphididae). Presented by JRG at the Young Scientists Recognition Award Symposium, the 223rd American Chemical Society National Meeting, Orlando, FL. Apr. 7-11, 2002 (**INVITED**).
295. Kaczmarek M., Zhu K. Y., Higgins R. A., Sloderbeck P. E., Comparative toxicities of three insecticides to soybean stem borer, *Dectes texanus* (Coleoptera, Cerambycidae) adults. A poster presented by MK at the ESA North Central Branch Annual Meeting, East Lansing, MI. Mar. 24-27, 2002.
296. Li H., Higgins R. A., Oppert B., Buschman L. L., Huang F., Zhu K. Y., Survival and damage of Dipel-resistant and -susceptible European corn borer strains on different parts of transgenic Bt and non-Bt corn plants. A poster presented by HL at the Annual Meeting of the ESA, San Diego, CA. Dec. 9-12, 2001.
297. Jin-Clark Y., Anderson T. D., Zhu K. Y., Atrazine-mediated alterations of gene expression in *Chironomus tentans* (Diptera: Chironomidae). A poster presented by TDA at the Annual Meeting of the ESA, San Diego, CA. Dec. 9-12, 2001.
298. Jin-Clark Y., Zhu K. Y., Effects of metolachlor and alachlor on chlorpyrifos toxicity in *Chironomus tentans* (Diptera: Chironomidae). A poster presented by KYZ at the Annual Meeting of the ESA, San Diego, CA. Dec. 9-12, 2001.
299. Zhu K. Y., Gao J.-R., Evidence of two acetylcholinesterase genes in the greenbug, *Schizaphis graminum* (Homoptera: Aphididae). A poster presented by KYZ at the Annual Meeting of the ESA, San Diego, CA. Dec. 9-12, 2001.
300. Li H., Higgins R. A., Oppert B., Buschman L. L., Huang F., Zhu K. Y., Survival and damage of Dipel-resistant and -susceptible European corn borer strains on different parts of transgenic Bt and non-Bt corn plants. Presented by HL at Entomology Research/Extension Session. Department of Entomology, KSU, Manhattan, KS. Nov. 15, 2001.
301. Zhu K. Y., A new organophosphate resistance mechanism in the greenbug (*Schizaphis graminum*). Entomology Research/Extension Session. Department of Entomology, KSU, Manhattan, KS. Nov. 15, 2001.
302. Zhu K. Y., Wilde G. E., Higgins R. A., Sloderbeck P. E., Buschman L. L., Shufran R. A., Whitworth R. J., Starkey S. R., Decreased susceptibility to carbaryl in western corn rootworm (*Diabrotica virgifera virgifera*) in Kansas Areawide-managed corn fields. Presented by KYZ at Entomology Research/Extension Session. Department of Entomology, KSU, Manhattan, KS. Nov. 15, 2001.
303. Zhu K. Y., Altered acetylcholinesterase conferring insecticide resistance in insects. College of Plant Protection, China Agricultural University, Beijing, China. Oct. 31, 2001 (**INVITED**).
304. Zhu K. Y., Biochemical and molecular studies of insect-pesticide interactions. Institute of Plant Protection, Chinese Academy of Agricultural Sciences, Beijing, China. Oct. 31, 2001 (**INVITED**).
305. Zhu K. Y., Altered acetylcholinesterase conferring insecticide resistance in insects. Institute of Zoology, Chinese Academy of Sciences, Beijing, China. Oct. 30, 2001 (**INVITED**).
306. Zhu K. Y., Biochemical and molecular studies of insect-pesticide interactions. Institute of Zoology, Chinese Academy of Sciences, Beijing, China. Oct. 30, 2001 (**INVITED**).
307. Zhu K. Y., Effects of atrazine and cyanazine on toxicity of chlorpyrifos in the aquatic midge (*Chironomus tentans*). Institute of Applied Entomology, Zhejiang University, Hangzhou, China. Oct. 26, 2001 (**INVITED**).

308. Zhu K. Y., Molecular basis of insecticide resistance mediated by altered acetylcholinesterase in insects (plenary presentation). The Fifth National Symposium in Insect Physiology, Biochemistry and Molecular Biology, and Sixth National Symposium in Urban Entomology, the Entomological Society of China, Hangzhou, China. Oct. 24, 2001 (**INVITED**).
309. Zhu K. Y., Biochemical and molecular studies of insect-pesticide interactions. Shanghai Institute of Pesticides, Shanghai, China. Oct. 23, 2001 (**INVITED**).
310. Zhu K. Y., Altered acetylcholinesterase conferring insecticide resistance in insects. Shanghai Institute of Entomology, Chinese Academy of Sciences, Shanghai, China. Oct. 22, 2001 (**INVITED**).
311. Zhu K. Y., Altered acetylcholinesterase conferring insecticide resistance in insects. College of Plant Protection, Nanjing Agricultural University, Nanjing, China. Oct. 19, 2001 (**INVITED**).
312. Zhu K. Y., Biochemical and molecular studies of insect-pesticide interactions. College of Plant Protection, Nanjing Agricultural University, Nanjing, China. Oct. 19, 2001 (**INVITED**).
313. Li H., Oppert B., Huang F., Higgins R. A., Buschman L. L., Zhu K. Y., Susceptibility of the K-State Dipel-resistant European corn borer strain to individual Bt protoxins. A poster presented by HL at the ESA North Central Branch Annual Meeting, Fort Collins, CO. Mar. 25-28, 2001.
314. Jin-Clark Y., Lydy M. J., Zhu K. Y., Synergistic effects of two triazine herbicides on toxicity of chlorpyrifos associated with increased acetylcholinesterase inhibition in *Chironomus tentans*. A poster presented by YJC at the ESA North Central Branch Annual Meeting, Fort Collins, CO. Mar. 25-28, 2001.
315. Zhu K. Y., Mechanisms of insect-pesticide interactions. Entomology Seminar, Department of Entomology, Kansas State University and Grain Marketing, Production and Research Center, USDA/ARS, College Avenue, Manhattan, KS. Feb. 23, 2001 (**INVITED**).
316. Zhu K. Y., Insects in their toxic environment: Biochemical and molecular basis of insect-pesticide interactions. Department of Entomology, Ohio Agricultural Research and Development Center, the Ohio State University, Wooster, OH. Jan. 18, 2001 (**INVITED**).
317. Zhu K. Y., Insects in their toxic environment: Biochemical and molecular basis of insect-pesticide interactions. Department of Entomology, the Ohio State University, Columbus, OH. Jan. 17, 2001 (**INVITED**).
318. Zhu K. Y., Wilde G. E., Higgins R. A., Sloderbeck P. E., Buschman L. L., Shufran R. A., Whitworth R. J., Starkey S. R., He F., Evidence of evolving carbaryl resistance in western corn rootworm (*Diabrotica virgifera virgifera*) in areawide managed fields in Kansas. A poster presented by KYZ at the Joint Annual Meeting of the SEQ, ESC and ESA, Montreal, Canada. Dec. 3-6, 2000.
319. Whitworth R. J., Wilde G. E., Shufran R. A., Sloderbeck P. E., Higgins R. A., Zhu K. Y., Four years of rootworm areawide management in Kansas. A poster presented by RJW at the Joint Annual Meeting of the SEQ, ESC and ESA, Montreal, Canada. Dec. 3-6, 2000.
320. Li H., Oppert B., Huang F., Higgins R. A., Buschman L. L., Zhu K. Y., Susceptibility of the K-State Dipel-resistant European corn borer strain to individual BT protoxins. A poster presented by HL at the Joint Annual Meeting of the SEQ, ESC and ESA, Montreal, Canada. Dec. 3-6, 2000.
321. Jin-Clark Y., Lydy M. J., Zhu K. Y., Synergistic effects of two triazine herbicides on toxicity of chlorpyrifos associated with increased acetylcholinesterase inhibition in *Chironomus tentans*. A poster presented by KYZ at the Joint Annual Meeting of the SEQ, ESC and ESA, Montreal, Canada. Dec. 3-6, 2000.
322. Gao J.-R., Zhu K. Y., Biochemical and molecular analyses of a unique acetylcholinesterase from the greenbug, *Schizaphis graminum* (Homoptera: Aphididae). A poster presented by JRG at the Joint Annual Meeting of the SEQ, ESC and ESA, Montreal, Canada. Dec. 3-6, 2000.
323. Ayala J., Beeman R. W., Dowdy A. K., Zhu K. Y., Cloning and sequencing of the cytochrome c oxidase subunit Va gene from a phosphine-susceptible strain of the lesser grain borer, *Rhyzopertha dominica* (F.) (Coleoptera: Bostrichidae). A poster presented by JA at the Joint Annual Meeting of the SEQ, ESC and ESA, Montreal, Canada. Dec. 3-6, 2000.

324. Jin-Clark Y., Zhu K. Y., Synergistic effects of pesticide mixtures on aquatic midges. Presented by JCY at Entomology Research/Extension Session. Department of Entomology, KSU, Manhattan, KS. Nov. 9, 2000.
325. Zhu K. Y., Wilde G. E., Higgins R. A., Sloderbeck P. E., Buschman L. L., Shufran R. A. Whitworth R. J., Starkey S. R., He F., Carbaryl resistance in western corn rootworm in Kansas. Presented by KYZ at Entomology Research/Extension Session. Department of Entomology, KSU, Manhattan, KS. Nov. 9, 2000.
326. Zhu K. Y., Insects used in environmental toxicology research. Manhattan Elementary Gifted Education Program, Manhattan, KS. Nov. 3, 2000 (**INVITED**).
327. Li H., Oppert B., Huang F., Higgins R. A., Buschman L. L., Zhu K. Y., Susceptibility of the K-State Dipel-resistant European corn borer strain to individual BT protoxins. A poster presented by HL at K-State Research and Extension Annual Conference in Manhattan, KS. Oct. 23-26, 2000.
328. Wilde G. E., Whitworth R. J., Shufran R. A., Higgins R. A., Sloderbeck P. E., Zhu K. Y., Buschman L. L., Kansas areawide corn rootworm management project 2000 summary. Presented by GEW at the USDA Corn Rootworm Areawide Management Annual Meeting in San Antonio, TX. Oct. 24-26, 2000.
329. Zhu K. Y., Buschman L. L., Margolies D. C., Yang X.-M., Changes in the susceptibility of spider mites to miticides after exposure to miticides in the laboratory. Presented by KYZ at K-State Southwest Research-Extension Center Field Day in Garden City, KS. Aug. 24, 2000.
330. Jin Y., Lydy M. J., Zhu K. Y., Increased inhibition of acetylcholinesterase in *Chironomus tentans* exposed to atrazine and chlorpyrifos mixtures. A poster presented by KYZ at Kansas EPSCoR Annual Conference in Manhattan, KS. Apr. 26, 2000.
331. Jin Y., Lydy M. J., Zhu K. Y., Increased inhibition of acetylcholinesterase in *Chironomus tentans* exposed to atrazine and chlorpyrifos mixtures. A poster presented by JY at Kansas EPA EPSCoR Meeting in Manhattan, KS. Apr. 25, 2000.
332. Zhu K. Y., Synergistic toxicity associated with increased inhibition of acetylcholinesterase in *Chironomus tentans* exposed to atrazine and chlorpyrifos mixtures. Kansas EPA EPSCoR Meeting in Manhattan, KS. Apr. 25, 2000.
333. Zhu K. Y., Gao J.-R., Starkey S. R., A new clone of the greenbug (*Schizaphis graminum*) resistant to organophosphates via alterations of acetylcholinesterase. A poster presented by KYZ at the 76<sup>th</sup> Annual Meeting of the Kansas (Central States) Entomological Society, Emporia, KS. Apr. 15, 2000.
334. Gao J.-R., Zhu K. Y., Purification and characterization of acetylcholinesterase from the greenbug, *Schizaphis graminum* (Homoptera: Aphididae). A poster presented by JRG at the 76<sup>th</sup> Annual Meeting of the Kansas (Central States) Entomological Society, Emporia, KS. Apr. 15, 2000.
335. Higgins R., Buschman L., Sloderbeck P., Huang F., Zhu K. Y., Martin V., McGaughey W., Oppert B., *Bt* corn, corn borer suppression, resistance management, multistate collaboration, and regulatory considerations. Presented by RH, USDA Grain Marketing and Production Research Center Seminar Series. Manhattan, KS. Apr. 12, 2000 (**INVITED**).
336. Zhu K. Y., Altered acetylcholinesterase conferring insecticide resistance in insects. Biological Science Seminar, Department of Biological Sciences, Wichita State University, Wichita, KS. Feb. 18, 2000 (**INVITED**).
337. Zhu K. Y., Gao J.-R., Starkey S. R., A new clone of the greenbug (*Schizaphis graminum*) resistant to organophosphates via alterations of acetylcholinesterase. A poster presented by KYZ in the Greenbug Poster Symposium at the Annual Meeting of the ESA, Atlanta, GA. Dec. 12-16, 1999 (**INVITED**).
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