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University Distinguished Professor

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(Updated 11/28/2023)

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

III. Professional Membership

- 2015- Present National Academy of Inventors
- 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 Recognitions

2019	Legacy Contribution Award, North Central Branch of the Entomological Society of America
2017	University Distinguished Professor (a Lifetime Title Representing the Highest Honor for the KSU Faculty), 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

2024- Present	Editor-in-Chief, <i>Pesticide Biochemistry and Physiology</i> , Elsevier
2016- 2018	Academic Editor, Section of Biochemistry, Molecular Biology and Biophysics, <i>International Journal of Molecular Sciences</i> , Basel, Switzerland
2015- 2023	Associate Editor, <i>Pesticide Biochemistry and Physiology</i> , Elsevier
2013- 2017	Academic Editor, <i>PLoS ONE</i> (http://www.plosone.org/)
2010- 2023	Associate Editor, <i>Pest Management Science</i> , Wiley InterScience
2001- 2018	Subject Editor, <i>Journal of Economic Entomology</i> , Entomological Society of America
2017-Present	Editorial board member, <i>Journal of Zhejiang University: Agriculture and Life Sciences</i> , Zhejiang University, Hangzhou, China
2013- Present	Editorial board member, <i>Journal of Plant Protection</i> , Chinese Society of Plant Protection and China Agricultural University
2012- 2020	Editorial board member, <i>Journal of Integrative Agriculture</i> , Elsevier B.V.
2011- Present	Editorial board member, <i>Pesticide Biochemistry and Physiology</i> , Elsevier
2009- Present	Editorial board member, <i>Archives of Insect Biochemistry and Physiology</i> , Wiley InterScience
2005- 2020	Editorial board member, <i>Acta Entomologica Sinica</i> , Entomological Society of China
2001- Present	Editorial board member, <i>Insect Science</i> , 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

- 2023 Member of the Organizing Committee, the Joint Meeting of the Fifth International Conference of Insect Genomics and the Eighth International Symposium on Insect Physiology, Biochemistry and Molecular Biology. Baoding, China (August 6-10, 2023)
- 2023 Yang Q., Zhang J., Moussion B., Zhu K. Y. (Organizers), *Insect Cuticle: Biology and Pest Management*. The Joint Meeting of the Fifth International Conference of Insect Genomics and the Eighth International Symposium on Insect Physiology, Biochemistry and Molecular Biology. Baoding, China (August 6-10, 2023, *unattended*)
- 2023 Co-moderator of Session 20 (Entomology 5). The Second International Molecular Plant Protection Congress, Orhangazi-Bursa, Turkey. May 15-18, 2023
- 2022 Presider for the second session of the 2022 American Chemical Society International Award for Research in Agrochemicals: The Many Faces of Insecticide Toxicology: Resistance, Mode of Action, New Insecticides & Novel Control Strategies at ACS Fall 2022, Chicago (Aug. 22, 2022)
- 2020 Member of the Program Committee for the Entomology 2020 Virtual Meeting, the Entomological Society of America (Nov. 11-25, 2020)
- 2020 Zhu K. Y., Hamm R. (Organizers), Organized Meeting: Physiology, Biochemistry, and Toxicology (PBT) Section Meeting- Networking Session. The Entomology 2020 Virtual Meeting, the Entomological Society of America (Nov. 11-25, 2020)
- 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 256th 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 256th American Chemical Society (ACS) National Meeting & Exposition, Boston, MA (Afternoon, Aug. 19, 2018)
- 2017 Member of the Academic Committee, 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 60th 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 60th 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"*, 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 58th 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 57th National Annual Meeting of the Entomological Society of America, Indianapolis, IN (Dec. 13-16, 2009)

VII. Committees and Professional Services

- 2023- Present Entomology Department Executive Committee, Kansas State University
- 2017- 2021 Governing Council member, Section of Physiology, Biochemistry and Toxicology (PBT), Entomological Society of America
- 2017- 2020 President (11/2019-11/2020), Vice President (11/2018- 11/2019), Vice President Elect (11/2017- 11/2018), PBT Section, 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
- 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

VIII. 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 (Total 238)

1. Ranabhat S., Domingue M. J., Lebar L., Bingham G. V., Zhu K. Y., Morrison III W. R. 2023. Disruption of semiochemical-mediated movement by the immature *Trogoderma variabile* Baillon and *Trogoderma inclusum* Le Conte (Coleoptera: Dermestidae) after exposure to long-lasting insecticide netting. Pest Manag. Sci. (in press, <https://doi.org/10.1002/ps.7903>).
2. Quellhorst H., Kim T. N., Zhu K. Y., Morrison III W. R. 2023. Short-term spatial dispersion patterns between the larger grain borer and the maize weevil in grain columns. Environ. Entomol. (in press, <https://doi.org/10.1093/ee/nvad111>).
3. Zhao Y., Liu W., Zhao X., Yu Z., Guo H., Yang Y., Merzendorfer H., Zhu K. Y., Zhang J. 2023. Low-density lipoprotein receptor-related protein 2 (LRP2) is required for lipid export in the midgut of the migratory locust, *Locusta migratoria*. J. Integr. Agr. (in press, <https://doi.org/10.1016/j.jia.2023.07.027>).
4. Brabec D., Lanka S., Campbell J., Arthur F. H., Scheff D., Zhu K. Y. 2023. Aerosolize insecticide spray distributions and relationships to storage insect efficacies. Insects 14: 914 (<https://doi.org/10.3390/insects14120914>).
5. Zhu Y., Kong L., Wang X., Xu J., Qian X., Yang Y., Xu Z., Zhu K. Y. 2023. Rolling circle transcription: A new system to produce RNA microspheres for improving RNAi efficiency in an agriculturally important lepidopteran pest (*Mythimna separate*). Pestic. Biochem. Physiol. 197: 105680 (<https://doi.org/10.1016/j.pestbp.2023.105680>).
6. Quellhorst H. E., Sakka M., Gkourgkouta M., Morrison III W. R., Zhu K. Y., Athanassiou C. G. 2023. Efficacy of deltamethrin and pirimiphos-methyl in proportionally layer-treated maize against the larger grain borer and the maize weevil. J. Econ. Entomol. 116: 1017-1024 (<https://doi.org/10.1093/jee/toad072>).
7. Wang Y., Li H., Liu X., Gao L., Fan Y., Zhu K. Y., Zhang J. 2023. Three alternative splicing variants of Loquacious play different roles in miRNA- and siRNA-mediated RNAi pathways in *Locusta migratoria*. RNA Biol. 20: 323-333 (<https://doi.org/10.1080/15476286.2023.2223484>).
8. Quellhorst H. E., Arthur F. H., Zhu K. Y., Bruce A., Morrison III W. R. 2023. The dispersal ability of the invasive larger grain borer and the cosmopolitan maize weevil after brief exposure to a newer insecticide formulation. J. Stored Prod. Res. 102: 102125 (<https://doi.org/10.1016/j.jspr.2023.102125>).
9. Zhang Y.-C., Gao Y., Ye W.-N., Peng Y.-X., Zhu K. Y., Gao C.-F. 2023. CRISPR/Cas9-mediated knockout of *NICYP6CS1* gene reveals its role in detoxification of insecticides in *Nilaparvata lugens* (Hemiptera: Delphacidae). Pest Manag. Sci. 79: 2239-2246 (<https://doi.org/10.1002/ps.7404>).
10. Han P., Chen D., Fan J., Zhang J., Jiang S., Zhu K. Y., Zhang J. 2023. Genetically engineered *Metarhizium anisopliae* expressing dsRNA of *Apolipoprotein-D* exhibits enhanced insecticidal virulence against *Locusta migratoria*. Entomol. Gen. 43: 167-175 ([10.1127/entomologia/2023/1772](https://doi.org/10.1127/entomologia/2023/1772)).

11. Xiao D., Yao J., Gao X., Zhu K. Y. 2023. Clathrin-dependent endocytosis plays a critical role in larval and pupal development, and female oocyte production in the red flour beetle (*Tribolium castaneum*). *Pest Manag. Sci.* 79: 1731-1742 (<https://doi.org/10.1002/ps.7348>).
12. Zhao Y., Liu W., Zhao X., Yu Z., Guo H., Yang Y., Moussian B., Zhu K. Y., Zhang J. 2023. Lipophorin receptor is required for the accumulations of cuticular hydrocarbons and ovarian neutral lipids in *Locusta migratoria*. *Inte. J. Biol. Macromol.* 236: 123746 (<https://doi.org/10.1016/j.ijbiomac.2023.123746>).
13. Fatehi S., Aikins M., Phillips T. W., Brown S., Zhu K. Y., Scully E. D., Park Y. 2023. Characterization of Iflavirus in the red flour beetle, *Tribolium castaneum* (Coleoptera: Tenebrionidae). *Insects* 14: 220 (<https://www.mdpi.com/2075-4450/14/3/220>).
14. Zeng B., Chen F. R., Liu Y. T., Guo D., Zhang Y. J., Feng Z. R., Wang L. X., Vontas J., Wu S. F., Zhu K. Y., Gao C. F. 2023. A chitin synthase mutation confers widespread resistance to buprofezin, a chitin synthesis inhibitor, in the brown planthopper, *Nilaparvata lugens*. *J. Pest Sci.* 96: 819-832 (<https://doi.org/10.1007/s10340-022-01538-9>).
15. Shi X., Li S., Yang L., Liu X., Merzendorfer H., Zhu K. Y., Zhang J. 2022. Clathrin heavy chain is essential for the development and reproduction of *Locusta migratoria*. *Insect Sci.* 29: 1601-1611 (<https://doi.org/10.1111/1744-7917.13030>).
16. Gao L., Wang Y., Abbas M., Zhang T., Ma E., Merzendorfer H., Zhu K. Y., Zhang J. 2022. Both LmDicer-1 and two LmDicer-2s participate in siRNA-mediated RNAi pathway and contribute to high gene silencing efficiency in *Locusta migratoria*. *Insect Biochem. Mol. Biol.* 151: 103865 (<https://doi.org/10.1016/j.ibmb.2022.103865>).
17. Zhang J., Shi X., Li S., Yang L., Chai L., Zhu K. Y. 2022. Advances and perspectives in the study of dsRNA uptake mechanism in insects. *J. Shanxi Univ. (Nat. Sci. Ed.) (Chinese with English abstract)*, 45: 816-825 (DOI: 10.13451/j.sxu.ns.2021165).
18. Li D., Zhang J., Yang Y., Liu J., Lu J., Ren M., Abbas M., Zhu K. Y., Zhang J. 2022. Identification and RNAi-based functional analysis of chitinase family genes in *Agrotis ipsilon*. *Pest Manag. Sci.* 78: 4278-4287 (<https://doi.org/10.1002/ps.7047>).
19. Shi X., Liu X., Silver K., Zhu K. Y., Zhang J. 2022. Lethal giant larvae gene is required for normal nymphal development and midgut morphogenesis in *Locusta migratoria*. *Insect Sci.* 29: 1017-1029 (<https://doi.org/10.1111/1744-7917.12996>).
20. Ranabhat S., Zhu K. Y., Bingham G. V., Morrison W. R. 2022. Mobility of phosphine-susceptible and resistant *Rhyzopertha dominica* (Coleoptera: Bostrichidae) and *Tribolium castaneum* (Coleoptera: Tenebrionidae) after exposure to controlled release materials with existing and novel active ingredients. *J. Econ. Entomol.* 115: 888-903 (<https://doi.org/10.1093/jee/toac033>).
21. Ramadan G. R. M., Zhu K. Y., Phillips T. W. 2022. Synergism of deltamethrin with a mixture of short chain fatty acids for toxicity against pyrethroid-resistant and susceptible strains of *Tribolium castaneum* (Coleoptera: Tenebrionidae). *Pestic. Biochem. Physiol.* 184: 105132 (<https://doi.org/10.1016/j.pestbp.2022.105132>).
22. Abbas M., Fan Y., Shi X., Gao L., Wang Y., Li T., Cooper A. M. W., Silver K., Zhu K. Y., Zhang J. 2022. Identification of Rab family genes and functional analyses of *LmRab5* and *LmRab11A* in the development and RNA interference of *Locusta migratoria*. *Insect Sci.* 29: 320-332 (<https://doi.org/10.1111/1744-7917.12921>).
23. Zhang J., Ma W., Yin F., Park Y., Zhu K. Y., Zhang X., Qin X., Li D. 2022. Evaluations of two glutathione S-transferase epsilon genes for their contributions to metabolism of three selected insecticides in *Locusta migratoria*. *Pestic. Biochem. Physiol.* 183: 105084 (<https://doi.org/10.1016/j.pestbp.2022.105084>).

24. Quellhorst H. E., Arthur F. H., Bruce A., Zhu K. Y., Morrison III W. R. 2022. Exposure to a reduced-risk insecticide on maize and concrete reduces movement by the stored product pests, *Prostephanus truncatus* Horn and *Sitophilus zeamais* Motschulsky. *Front. Agron.* 4: 868509 (<https://doi.org/10.3389/fagro.2022.868509>).
25. Shi X., Liu X., Cooper A. M. W., Silver K., Merzendorfer H., Zhu K. Y., Zhang J. 2022. Vacuolar (H⁺)-ATPase subunit c is essential for the survival and systemic RNA interference response in *Locusta migratoria*. *Pest Manag. Sci.* 78: 1555-1566 (<https://doi.org/10.1002/ps.6774>).
26. Fan Y., Abbas M., Liu X., Wang Y., Song H., Li T., Ma E., Zhu K. Y., Zhang J. 2022. Increased RNAi efficiency by dsEGFP-induced up-regulation of two core RNAi pathway genes (*OfDicer2* and *OfAgo2*) in the Asian corn borer (*Ostrinia furnacalis*). *Insects* 13: 274 (<https://doi.org/10.3390/insects13030274>).
27. Yu R., Zhang R., Liu W. M., Zhao X. M., Zhu K. Y., Moussian B., Zhang J. Z. 2022. The DOMON domain protein LmKnk contributes to correct chitin content, pore canal formation and lipid deposition in the cuticle of *Locusta migratoria* during molting. *Insect Mol. Biol.* 31: 127-138 (<https://doi.org/10.1111/imb.12745>).
28. Fan Y., Song H., Abbas M., Wang Y., Liu X., Li T., Ma E., Zhu K. Y., Zhang J. 2022. The stability and sequence cleavage preference of dsRNA are key factors differentiating RNAi efficiency between migratory locust and Asian corn borer. *Insect Biochem. Mol. Biol.* 143: 103738 (<https://doi.org/10.1016/j.ibmb.2022.103738>).
29. Chen H., Chen C., Yu Z., Silver K., Campbell J., Arthur F., Huang Y., Hu F., Zhu K. Y. 2022. Comparative analyses of six cytochrome P450 genes and their roles in differential insecticide susceptibilities between the red flour beetle and the confused flour beetle. *J. Stored Prod. Res.* 96: 101951 (<https://doi.org/10.1016/j.jspr.2022.101951>).
30. Liu X. J., Liang X. Y., Guo J., Shi X. K., Merzendorfer H., Zhu K. Y., Zhang J. Z. 2022. V-ATPase subunit a is required for survival and the midgut development of *Locusta migratoria*. *Insect Mol. Biol.* 31: 60-72 (<https://doi.org/10.1111/imb.12738>).
31. van Winkle T., Ponce M., Quellhorst H., Bruce A., Albin C. E., Kim T., Zhu K. Y., Morrison III W. R. 2022. Microbial volatile organic compounds mediate attraction by a primary but not secondary stored product insect pest in wheat. *J. Chem. Ecol.* 48: 27-40 (<https://doi.org/10.1007/s10886-021-01312-8>).
32. **Campbell J. F., Athanassiou C., Hagstrum D., Zhu K. Y. 2022. *Tribolium castaneum*: A model insect for fundamental and applied research. *Annu. Rev. Entomol.* (67: 347-365, <https://doi.org/10.1146/annurev-ento-080921-075157>) (HIGHLY CITED PAPER**, 2022).**
33. Fan Y., Song H., Abbas M., Wang Y., Li T., Ma E., Cooper A. M. W., Silver K., Zhu K. Y., Zhang J. 2021. A dsRNA-degrading nuclease (dsRNase2) limits RNAi efficiency in the Asian corn borer (*Ostrinia furnacalis*). *Insect Sci.* 28: 1677-1689 (<https://doi.org/10.1111/1744-7917.12882>).
34. Gao L., Wang Y., Abbas M., Zhang T., Ma E., Xing S., Zhu K. Y., Zhang J. 2021. Molecular characterizations and functional analyses of LmR2D2 in *Locusta migratoria* siRNA pathway. *Insects* 12(9): 812 (<https://doi.org/10.3390/insects12090812>).
35. **Silver K., Cooper A. M. W., Zhu K. Y. 2021. Strategies for enhancing the efficiency of RNA interference in insects. *Pest Manag. Sci.* 77: 2645-2658 (<https://doi.org/10.1002/ps.6277>) (HIGHLY CITED PAPER**, 2022).**
36. Quellhorst H., Athanassiou C. G., Zhu K. Y., Morrison III W. R. 2021. The biology, ecology, and management of the larger grain borer, *Prostephanus truncatus* (Horn) (Coleoptera: Bostrichidae). *J. Stored Prod. Res.* 94: 101860 (<https://doi.org/10.1016/j.jspr.2021.101860>).
37. Cooper A.M.W., Song, H., Shi X., Yu Z., Kim, Y. H., Silver, K., Zhang, J., Zhu, K.Y. 2021. Molecular characterization and RNA interference responses of the lethal giant larvae gene in *Diabrotica*

virgifera virgifera adults. Arch. Insect Biochem. Physiol. 107 (2): e21787
(<https://doi.org/10.1002/arch.21787>).

38. Aguirre-Rojas L. M., Scully E. D., Trick H., Zhu K. Y., Smith C. M. 2021. Comparative analyses of transcriptional responses of *Dectes texanus* LeConte (Coleoptera: Cerambycidae) larvae fed on three different host plants and artificial diet. Sci. Rep. 11: 11448 (<https://doi.org/10.1038/s41598-021-90932-x>).
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* **Hot Paper** published in the past two years and received enough citations to place it in the top 0.1% of papers in the academic field of Plant & Animal Science.

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Books, Book Chapters and Proceedings Papers (Total 17)

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3. Quellhorst H. E., Kim T. N., Zhu K. Y., Morrison III W. R. 2022. Short-term spatial niche partitioning in single-layer grain columns between the larger grain borer and the maize weevil with implications for management of stored maize. Proceedings of the IOBC-WPRS Working Group on Integrated Stored Product Protection at Barcelona (Spain), October 3-6, 2022. IOBC-WPRS Bulletin 159: 48.
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X. Research Presentations (Total 463 with 175 invited)

1. Quellhorst H. E., Gerken A. R., Scully E. D., Ludwick D., Athanassiou C., Zhu K. Y., Morrison W. R., Sakka M. K., Odjo S., Science policy and research: The case of invasive species. Presented by HEQ, Member Symposium, Entomology 2023: National Meeting of the Entomological Society of America, National Harbor, MD. Nov. 5-8, 2023 (**INVITED**).
2. Singh R., Peterson J., Santana A., Zhu K. Y., Siliveru K., Smolensky D., Scully E. D., Investigating the role of sorghum polyphenolics in mediating resistance to stored product insect infestation. Presented by RS, Student Competition 10-Min Paper. Entomology 2023: National Meeting of the Entomological Society of America, National Harbor, MD. Nov. 5-8, 2023.

3. Scribner H. F., Murrell E. G., Cheremond N., Zhu K. Y., Morrison W. R., Determining a lower developmental threshold and phenological predictions for a growing degree day model to manage the giant eucosma moth, *Eucosma giganteana*. Presented by HFS, Student Competition 10-Min Paper. Entomology 2023: National Meeting of the Entomological Society of America, National Harbor, MD. Nov. 5-8, 2023.
4. Liba T. J., Scheff D., Zhu K. Y., Application of grain protectants on sorghum grain and their effects on pest insects. Presented by TJL, Student Competition 10-Min Paper. Entomology 2023: National Meeting of the Entomological Society of America, National Harbor, MD. Nov. 5-8, 2023.
5. Ranabhat S., Starkus L., McKay T., Bingham G. V., Zhu K. Y., Morrison W. R., Understanding the behavioral ecology of stored product insects in response to integrated pest management tactics. Presented by SR, Section Symposium, Entomology 2023: National Meeting of the Entomological Society of America, National Harbor, MD. Nov. 5-8, 2023 (**INVITED**).
6. Zhu K. Y., Implication of a potential mechanism of resistance to RNAi-based biopesticides in insects. Section Symposium, Entomology 2023: National Meeting of the Entomological Society of America, National Harbor, MD. Nov. 5-8, 2023 (**INVITED**).
7. Morrison W. R., Ranabhat S., Quellhorst H. E., Ponce M. A., Harman R., Gerken A. R., Kim T. N., Zhu K. Y., Using behavior and ecology to help improve integrated pest management programs for stored product insects in a warming world. Presented by WRM, Member Symposium, Entomology 2023: National Meeting of the Entomological Society of America, National Harbor, MD. Nov. 5-8, 2023 (**INVITED**).
8. Maille J., Reed J., Dryer D., Campbell J., Zhu K. Y., Morrison W. R., Scully E. D., Indianmeal moth courtship: A pattern of perception. Presented by JM, Member Symposium, Entomology 2023: National Meeting of the Entomological Society of America, National Harbor, MD. Nov. 5-8, 2023 (**INVITED**).
9. Quellhorst H. E., Zhu K. Y., Morrison W. R., Improving management of the larger grain borer, *Prostephanus truncatus*, and the maize weevil, *Sitophilus zeamais*. Poster (D3012) presented by HEQ, Grad Poster Competition. Entomology 2023: National Meeting of the Entomological Society of America, National Harbor, MD. Nov. 5-8, 2023.
10. Uddin M. N., Starkus L., Ranabhat S., Zhu K. Y., Morrison W. R., McKay T., The efficacy of insecticide-incorporated netting for preventing maize weevils (Coleoptera: Curculionidae) from infesting brown rice. Poster (D3016) presented by MNU, Grad Poster Competition. Entomology 2023: National Meeting of the Entomological Society of America, National Harbor, MD. Nov. 5-8, 2023.
11. Ranabhat S., Gerken A. R., Scheff D. S., Zhu K. Y., Morrison W. R., Modeling long-term, stage-structured dynamics of *Tribolium castaneum* at food facilities with and without long-lasting insecticide netting. Poster (D3037) presented by SR, Grad Poster Competition. Entomology 2023: National Meeting of the Entomological Society of America, National Harbor, MD. Nov. 5-8, 2023.
12. Reed J. R., Maille J., Morrison W. R., Zhu K. Y., Scully E. D., Long-term flight patterns of Indian meal moth. Poster (D3184) presented by JRR, Undergrad Poster Competition. Entomology 2023: National Meeting of the Entomological Society of America, National Harbor, MD. Nov. 5-8, 2023.
13. Ming Q., Scully E. D., Morrison W. R., Campbell J. F., Zhu K. Y., Recovery of *Tribolium castaneum* (Herbst) after exposure to long-lasting insecticidal netting in the presence of food. Poster (D3253) presented by QM. Entomology 2023: National Meeting of the Entomological Society of America, National Harbor, MD. Nov. 5-8, 2023.
14. Quellhorst H., Sakka M., Tsintzou G., Madesis P., Vagelas I., Maille J. M., Ponce M. A., Scully E., Athanassiou C., Zhu K. Y., Morrison W. R., The microbial ecology of stored product insect pests in

- Greece. Presented by HQ at the ECE 2023: XII European Congress of Entomology in Crete, Greece. Oct. 16-20, 2023.
15. Scheff D., Arthur F., Campbell J., Gerken A., Morrison W. R., Zhu K. Y., Comparison of two formulations of insecticide-treated netting: Efficacy and sublethal effects. Presented by DS at the ECE 2023: XII European Congress of Entomology in Crete, Greece. Oct. 16-20, 2023.
 16. Zhu K. Y., Zhang J., Breaking down the barriers: Strategies to enhance RNAi efficiency in insects. Presented by KYZ at the Second International Molecular Plant Protection Congress, Orhangazi-Bursa, Turkey. May 15-18, 2023 (**INVITED KEYNOTE SPEECH**).
 17. Singh R., Peterson J., Santana A. L. D., Zhu K.Y., Siliveru K., Smolensky D., Scully E., Investigating the role of sorghum polyphenolics in mediating resistance to stored product insect infestation. Poster presented by RS at the 155th Annual Meeting of the Kansas Academy of Sciences and Kansas Entomological Society. McPherson, KS. Apr. 14–15, 2023.
 18. Maille J. M., Brabec D., Zhu K. Y., Morrison III W. R. Scully E. D., Non-destructive electronic nose technology for early detection of stored product pests. Presented by JMM at the 155th Annual Meeting of the Kansas Academy of Sciences and Kansas Entomological Society. McPherson, KS. Apr. 14–15, 2023.
 19. Scribner H., Stratton C., Hansen P., Murrell E., Zhu K. Y., Morrison III W. R., Headspace emissions from *Silphium integrifolium* and antennal response to insect-produced cues by the moth *Eucosma giganteana*. Poster presented by HS at the 2023 Joint ESA North Central and Southwestern Branch Meeting, Oklahoma City, OK. April 16-19, 2023.
 20. Quellhorst H. E., Odjo S., Vagelas I., Madesis P., Athanassiou C., Zhu K. Y., Morrison III W. R., Forming international partnerships to help stop an invasive pest of stored maize. Presented by HEQ at the 2023 Joint ESA North Central and Southwestern Branch Meeting, Oklahoma City, OK. April 16-19, 2023. (**INVITED**).
 21. Quellhorst H. E., Ponce M., Maille J., Scully E., Athanassiou C., Zhu K. Y., Morrison III W. R., The microbial ecology of an invasive insect pest of stored grain. Poster presented by HEQ at the 2023 Joint ESA North Central and Southwestern Branch Meeting, Oklahoma City, OK. April 16-19, 2023.
 22. Ranabhat S., Brabec D., Stoll I., Bingham G., Zhu K. Y., Morrison III W. R., Insecticide-treated netting deployment helps to improve fumigation efficacy in bulk storage at food facilities. Poster presented by SR at the 2023 Joint ESA North Central and Southwestern Branch Meeting, Oklahoma City, OK. April 16-19, 2023.
 23. Zhu K. Y., Breaking down the barriers: Strategies to enhance RNAi efficiency in insects. Insect Group Meeting, Department of Biochemistry and Biophysics, Kansas State University, Manhattan, KS. Jan. 27, 2023.
 24. Avery M., Zhu K. Y., Mechanisms affecting the efficacy of long-lasting insecticidal netting against the lesser grain borer. Poster presented by MA at the 2022 Entomology Undergraduate Research Symposium at Kansas State University, Manhattan, KS. Dec. 8, 2022.
 25. Orpin C., Zhu K. Y., Improving the effectiveness of long-lasting insecticidal netting against the lesser grain borer by using synergists. Poster presented by CO at the 2022 Entomology Undergraduate Research Symposium at Kansas State University, Manhattan, KS. Dec. 8, 2022.
 26. Zhu K. Y., RNAi for insect pest management: Promises, challenges and strategies. Presented at Virtual Symposium on Insect Cuticle Development and Physiology, Shanxi University, Taiyuan, Shanxi, China. Dec. 03, 2022 (**INVITED**).
 27. Wilkins R., Zhu K. Y., Campbell J. F., Morrison III W. R., Mobility and dispersal of two cosmopolitan stored product insects are adversely affected by long-lasting insecticide netting in a life stage-dependent manner. Presented virtually by RW as Runner-up for the Journal of Economic Entomology Editor's Choice Award at the Entomological Society of America, Entomological Society

- of Canada, and Entomological Society of British Columbia Joint Annual Meeting. Vancouver, Canada. Nov. 13–16, 2022 (**INVITED**).
28. Scully E. D., Bingham G., Nguyen V., Olmstead M. L., Oppert B., Zhu K. Y., Metabarcoding and population genomics to assess usage of alternate habitats by *Rhyzopertha dominica* (Coleoptera: Bostrichidae). 10-minute paper presented by ES at the Entomological Society of America, Entomological Society of Canada, and Entomological Society of British Columbia Joint Annual Meeting. Vancouver, Canada. Nov. 13–16, 2022.
 29. Ranabhat S., Bingham G., Zhu K. Y., Morrison III W. R., Deployment of insecticide-treated netting to improve fumigation efficacy in bulk storage at food facilities. Student competition poster virtually presented by SR at the Entomological Society of America, Entomological Society of Canada, and Entomological Society of British Columbia Joint Annual Meeting. Vancouver, Canada. Nov. 13–16, 2022.
 30. Quellhorst H. E., Ponce M. A., Maille J. M., Athanassiou C., Scully E. D., Zhu K. Y., Morrison III W. R., Capacity of the larger grain borer and the maize weevil to vector microbes after foraging at novel food patches. Student competition poster presented by HEQ at the Entomological Society of America, Entomological Society of Canada, and Entomological Society of British Columbia Joint Annual Meeting. Vancouver, Canada. Nov. 13–16, 2022.
 31. Quellhorst H. E., Kim T. N., Athanassiou C., Zhu K. Y., Morrison III W. R., Understanding the foraging ecology of the larger grain borer, a forthcoming biosecurity threat to the US. Member symposium presented by HEQ at at the Entomological Society of America, Entomological Society of Canada, and Entomological Society of British Columbia Joint Annual Meeting. Vancouver, Canada. Nov. 13–16, 2022 (**INVITED**).
 32. Maille J. M., Liba T. J., Fields Z. Q., Dryer D., Campbell J., Zhu K. Y., Morrison III W. R., Scully E. D., Diurnal rhythm in sex pheromone perception patterns of Indianmeal moth, *Plodia interpunctella* (Lepidoptera: Pyralidae). Presented by JMM at at the Entomological Society of America, Entomological Society of Canada, and Entomological Society of British Columbia Joint Annual Meeting. Vancouver, Canada. Nov. 13–16, 2022.
 33. Ranabhat S., Brabec D., Bingham G. V., Zhu K. Y., Morrison III W. R., Deployment of insecticide-treated netting to improve fumigation efficiency in bulkstorage at Kansas food facilities. Research and the Atate Graduate Student Poster Session, Kansas State University, Manhattan, KS. Oct. 27, 2022.
 34. Quellhorst H. E., Zhu K. Y., Kim T. N., Morrison III W. R., Short-term spatial niche partitioning in single-layer grain columns between the larger grain borer and the maize weevil with implications for management of stored maize. Presented by HEQ at the IOBC/WPRS Working Group Integrated Protection of Stored Products. Barcelona, Spain. Oct. 2022.
 35. Zhu K. Y., Breaking down the barriers: Strategies to enhance RNAi eefficiency in insects. Department of Entomology, University of Nebraska, Lincoln, NE. Sep. 02, 2022 (Virtual seminar, **INVITED**).
 36. Zhu K. Y., Breaking down the barriers: Strategies to enhance RNAi eefficiency in insects. Symposium of the 2022 ACS International Award for Research in Agrochemicals: The Many Faces of Insecticide Toxicology: Resistance, Mode of Action, New Insecticides & Novel Control Strategies at the ACS Fall 2022, Chicago, IL. Aug. 21- 25, 2022 (**INVITED**).
 37. Morrison III W. R., Ponce M. A., Quellhorst H. E., Sierra P., Lizarraga S., Kim T. N., Zhu K. Y., Potential application for using microbial volatiles for insect pest management in the postharvest supply chain. Presented by WRM at the 37th Annual Meeting of the International Society of Chemical Ecology, Kuala Lumpur, Malaysia, Aug. 2022. (**INVITED**)

38. Morrison III W. R., Ponce M., Maille J. M., Kim T., Zhu K. Y., Scully E., Attraction by stored product insects to microbial volatiles as an underexploited source for behaviorally-relevant compounds in food facilities. Presented by WRM at the International Congress of Entomology. Helsinki, Finland. Jul. 19–24, 2022 (**INVITED**).
39. Morrison III W. R., Ranabhat S. R., Bingham G. V., Zhu K. Y., Existing and novel controlled release materials are effective against phosphine-susceptible and -resistant red flour beetle and lesser grain borer. NC-213 Annual Meeting, U.S. Grain Consortium, “Marketing and Delivery of Quality Grains and BioProcess Coproducts” co-located with GEAPS Exchange 2022, Kansas City, MO. Mar. 29-30, 2022.
40. Zhu K. Y., Breaking down the barriers: Strategies to enhance RNAi efficiency in insects. Special Lectuer, Department of Entomology and School of Integrative Biology, University of Illinois at Urbana-Champaign, IL. Mar. 24, 2022 (**INVITED**).
41. Ranabhat S., LeBar L., Domingue M., Bingham G. V., Zhu K. Y., Morrison III W. R., Exposure to insecticide netting affects the behavioral response of larval warehouse beetle, *Trogoderma variabile* (Coleoptera: Dermestidae) to food and pheromonal stimuli. Poster presented by SR at at the Entomological Society of America: North Central Branch Meeting. Minneapolis, MN. Mar. 20–23, 2022.
42. Maille J. M., Liba T., Brabec D., Zhu K.Y., Morrison III W. R., Scully E. D., Electronic nose detection of *Tribolium castaneum* (Coleoptera: Tenebrionidae) in wheat. Presented by JMM at the Entomological Society of America: North Central Branch Meeting. Minneapolis, MN. Mar. 20–23, 2022.
43. Quellhorst H. E., Zhu K. Y., Kim T. N., Morrison III W. R., Short-term spatial niche partitioning between the larger grain borer and the maize weevil: do semiochemicals play a role? Presented by HEQ at the Entomological Society of America: North Central Branch Meeting. Minneapolis, MN. Mar. 20–23, 2022.
44. Quellhorst H. E., Arthur F. H., Zhu K. Y., Morrison III, W. R., Reduced dispersal capacity of the invasive larger grain borer (*Prostephanus truncatus*) and the cosmopolitan maize weevil (*Sitophilus zeamais*) after exposure to a novel and reduced risk insecticide. Presented by HEQ at the 10th International IPM Symposium, Denver, CO. Feb. 2022. (**INVITED**).
45. Edwards N., Zhu K. Y., Comparing esterase activity in different tissues of a house cricket. Poster presented by NE at the 2021 Entomology Undergraduate Research Symposium at Kansas State University, Manhattan, KS. Dec. 9, 2021.
46. Fernando M., Zhu K. Y., Esterase activity in different tissues of *Phyllophaga* sp. Poster presented by MF at the 2021 Entomology Undergraduate Research Symposium at Kansas State University, Manhattan, KS. Dec. 9, 2021.
47. Nguyen V., Zhu K. Y., Scully E. D., Population dynamics and resource utilization of *Rhyzopertha dominica* in Manhattan, KS. Presented by VN, PBT Section Student Competition 10-Min Paper. Entomology 2021: National Meeting of the Entomological Society of America, Denver, CO. Oct. 31- Nov. 3, 2021.
48. Cooper A. M. W., Silver K., Zhang J., Zhu K. Y., Mechanisms influencing the efficiency of RNA interference in the European corn borer. Presented by AMWC, PBT Section Symposium: Technical Advances and Regulatory Perspectives in RNAi for Control of Agricultural Pests. Entomology 2021: National Meeting of the Entomological Society of America, Denver, CO. Oct. 31- Nov. 3, 2021 (**INVITED**).
49. Ranabhat S., Bingham G. V., Zhu K. Y., Morrison III W. R., Assessing the locomotor behavior of phosphine-susceptible and -resistant *Rhyzopertha dominica* (Coleoptera: Bostrichidae) and *Tribolium castaneum* (Coleoptera: Tenebrionidae) after exposure to controlled release materials

- with different active ingredients. Presented by SR, PBT Section 10-Min Paper. Entomology 2021: National Meeting of the Entomological Society of America, Denver, CO. Oct. 31- Nov. 3, 2021.
50. Ranabhat S., Bingham G. V., Zhu K. Y., Morrison III W. R., Mobility of phosphine-susceptible and -resistant *Tribolium castaneum* (Coleoptera: Tenebrionidae) and *Rhyzopertha dominica* (Coleoptera: Bostrichidae) after exposure to insecticide netting. Presented by SR, the Annual Meeting of the Society of Overseas Nepalese Entomologists, Denver, CO. Oct. 31- Nov. 3, 2021 **(INVITED)**.
 51. Ranabhat S., Bingham G. V., Zhu K. Y., Morrison III W. R., Brief exposure to insecticide netting interrupts olfaction and taxis to kairomones and pheromones by the warehouse beetle, *Trogoderma variabile* (Coleoptera: Dermestidae). Poster presented by SR, Entomology 2021: National Meeting of the Entomological Society of America, Denver, CO. Oct. 31- Nov. 3, 2021.
 52. Maille J. M., Brabec D., Zhu K. Y., Morrison III W. R., Scully E. D., Leveraging electronic nose technology for early detection of primary stored product pest infestations. Presented by JMM, PBT Student Competition 10-Min Paper, Entomology 2021: National Meeting of the Entomological Society of America, Denver, CO. Oct. 31- Nov. 3, 2021.
 53. Quellhorst H. E., Zhu K. Y., Kim T. N., Morrison III W. R., Short-term spatial niche partitioning between the larger grain borer and the maize weevil with implications for management of stored maize. Presented by HEQ, MUVE Section Student Competition 10-Min Paper, Entomology 2021: National Meeting of the Entomological Society of America, Denver, CO. Oct. 31- Nov. 3, 2021.
 54. Ranabhat S., Bingham G. V., Zhu K. Y., Morrison III W. R., 2021. Mobility of phosphine-susceptible and -resistant *Tribolium castaneum* (Coleoptera: Tenebrionidae) and *Rhyzopertha dominica* (Coleoptera: Bostrichidae) after exposure to insecticide netting. Poster presented by SR, Research and the State, Kansas State University. Manhattan, Kansas, Oct. 27, 2021.
 55. Morrison III W. R., Ranabhat S., Wilkins R. V., Domingue M., Myers S., Athanassiou C., Scully E. D., Campbell J. F., Zhu K. Y., Improving semiochemical resources and behaviorally-based management strategies for stored products: from the laboratory to food facilities. Presented by WRM, the 36th Annual Meeting of the International Society of Chemical Ecology (ISCE), South Africa, Sep. 2021 **(INVITED)**.
 56. Morrison III W. R., Wilkins R. V., Zhu K. Y., Developing semiochemical-mediated, behaviorally-based pest management strategies to maximize global food security after harvest. Presented by WRM, Section of Pest Management, the First International Electronic Conference on Entomology, July 1-15, 2021.
 57. Maille J., Morrison III W. R., Zhu K. Y., Brabec D., Scully E. D., Sensing trouble: Electronic nose technology for the improved detection of stored product pests. Presented by JM, Symposium "Sensing Solutions: Advances in Chemosensation and Behaviorally-based Management of Agricultural Insects", 2021 Virtual ESA North Central Branch Meeting, June 21-23, 2021 **(INVITED)**.
 58. Nguyen V., Zhu K. Y., Scully E., Population dynamics and resource utilization of *Rhyzopertha dominica* in Manhattan, KS. Masters Student 10-Minute Paper Competition presented by VN, 2021 Virtual ESA North Central Branch Meeting, June 21-23, 2021.
 59. Ranabhat S., Bingham G. V., Zhu K. Y., Morrison III W. R., Mobility of phosphine-susceptible and resistant *Tribolium castaneum* (Coleoptera: Tenebrionidae) and *Rhyzopertha dominica* (Coleoptera: Bostrichidae) after exposure to insecticide netting. Poster presented by SR, 2021 Virtual ESA North Central Branch Meeting, June 21-23, 2021.
 60. Maille J., Morrison III W. R., Zhu K. Y., Scully E. D., A systematic review on the genetic basis of chemosensation among stored product arthropods. Doctoral Student Poster Competition presented by JM, 2021 Virtual ESA North Central Branch Meeting, June 21-23, 2021.

61. Quellhorst H. E., Zhu K. Y., Kim T. N., Morrison III W. R., Short-term spatial niche partitioning between the larger grain borer and the maize weevil with implications for management of stored maize. Doctoral Student Poster Competition presented by HEQ, 2021 Virtual ESA North Central Branch Meeting, June 21-23, 2021.
62. Albin C., Zhu K. Y., Morrison III W. R., The mobility and olfactory preference of the postharvest wasp *Theocolax elegans* (Westwood) (Hymenoptera: Pteromalidae) for prey stimuli is modulated by natal host environment. Undergraduate Student Poster Competition presented by CA, 2021 Virtual ESA North Central Branch Meeting, June 21-23, 2021.
63. Zhu K. Y., Developing molecular strategies for insect pest management. Department of Entomology, University of Georgia, Athens, GA. Apr. 12, 2021 (Virtual seminar, **INVITED**).
64. Morrison III W. R., Wilkins R. V., Zhu K. Y., Developing semiochemical-mediated, behaviorally-based pest management strategies to maximize global food security. Presented by WRM, the 25th Annual Green Chemistry & Engineering Conference, June 14-18, 2021 (**INVITED**).
65. Maille J., Morrison III W. R., Zhu K. Y., Scully E. D., Genetic and molecular approaches to improving stored product insect semiochemical-mediated, behaviorally-based management. Poster presented by JM, 2021 Virtual ESA International Branch Symposium, Apr. 26–28, 2021.
66. Ranabhat S., Bingham G. V., Zhu K. Y., Morrison III W. R., Assessing the locomotor behavior of phosphine-susceptible and -resistant *Rhyzopertha dominica* (Coleoptera: Bostrichidae) after exposure to controlled release materials with different active ingredients. Poster presented by SR, 2021 Virtual ESA International Branch Symposium, Apr. 26–28, 2021.
67. Cooper A. M. W., Silver K., Zhu K. Y., Mechanisms influencing RNAi efficiency in insects. Presented by AMWC, the iPlanta Webinar Series: Contribution of RNAi to Sustainable Agriculture, Food Safety and Security, <https://www.iplantawebinars.com>, Feb. 16, 2021 (**INVITED**).
68. Cooper A., Yu Z., Song H., Silver K., Zhang J., Zhu K. Y., Characterization of double-stranded RNA (dsRNA) degrading nuclease genes and strategies for enhancing dsRNA stability in the European corn borer. Presented by AC, PBT10-Minute Paper: Molecular and Cellular Biology (On-Demand). Entomology 2020: Virtual National Meeting of the Entomological Society of America, Nov. 11-25, 2020.
69. Featherston K., Zhu K. Y., Park Y., Silver K., Characterizing exosomal miRNAs from a *Diabrotica* cell line. Presented by KF, PBT Student Competition 10-Minute Paper: Biochemistry, Molecular Biology, Physiology (On-Demand). Entomology 2020: Virtual National Meeting of the Entomological Society of America, Nov. 11-25, 2020.
70. Maille J., Riley S., Brabec D., Zhu K. Y., Morrison W. R., Scully E. D., Sniffing out *Rhyzopertha dominica* (Coleoptera: Bostrichidae) infestation in wheat by leveraging the latest electronic nose technology. Presented by JM, P-IE Student Competition 10-Minute Paper: Molecular and Novel Tools (On-Demand). Entomology 2020: Virtual National Meeting of the Entomological Society of America, Nov. 11-25, 2020.
71. Morrison W. R., Wilkins R., Campbell J. F., Zhu K. Y., Using the behavioral ecology of stored product insects to inform deployment of long-lasting insecticide netting in food facilities. Presented by WRM, Member Symposium: Farm to Fork: Linking Biology of Postharvest Insects to their Management (On-Demand). Presented by WRM. Entomology 2020: Virtual National Meeting of the Entomological Society of America, Nov. 11-25, 2020 (**INVITED**).
72. Nguyen V., Scully E. D., Zhu K. Y., The lesser grain borer: Not boring at all! Presented by VN, P-IE Student Competition Infographic. Presented by VN. Entomology 2020: Virtual National Meeting of the Entomological Society of America, Nov. 11-25, 2020.
73. Quellhorst H. E., Arthur F. H., Morrison W. R., Zhu K. Y., The dispersal capacity of the invasive larger grain borer (*Prostephanus truncatus*) and the cosmopolitan maize weevil (*Sitophilus zeamais*) after

- exposure to a novel and reduced-risk insecticide. Presented by HEQ, MUVE Student Competition Poster: Urban, Veterinary, and Forensic Entomology. Entomology 2020: Virtual National Meeting of the Entomological Society of America, Nov. 11-25, 2020.
74. Quellhorst H. E., Zhu K. Y., Morrison W. R., Bruce A., Scully E. D., Athanassiou C., Patterns and mechanisms for niche partitioning between the larger grain borer (*Prostephanus truncatus*) and the maize weevil (*Sitophilus zeamais*) and its implications for management of stored maize. Presented by HQ, Member Symposium: Farm to Fork: Linking Biology of Postharvest Insects to their Management (On-Demand). Entomology 2020: Virtual National Meeting of the Entomological Society of America, Nov. 11-25, 2020 (**INVITED**).
 75. Ranabhat S., Bingham G. Y., Zhu K. Y., Morrison W. R., Mobility of phosphine-susceptible and -resistant *Rhyzopertha dominica* (Coleoptera: Bostrichidae) after exposure to control release materials with different active ingredients. Presented by SR, PBT Student Competition Poster: Toxicology, Management, and Microbial Associations. Entomology 2020: Virtual National Meeting of the Entomological Society of America, Nov. 11-25, 2020.
 76. Silver K., Featherston K., Fatehi S., Londono-Renteria B., Zhu K. Y., Park Y., New insights into the development of RNA products for controlling agricultural and medically important insect pests. Presented by KS, PBT Section Symposium: New Insights into the Development of RNA Products for Controlling Agricultural and Medically Important Insect Pests (On-Demand). Entomology 2020: Virtual National Meeting of the Entomological Society of America, Nov. 11-25, 2020 (**INVITED**).
 77. Wilkins R. V., Zhu K. Y., McKay T., Starkus L., Campbell J. F., Morrison W. R., Traps with long-lasting insecticide-incorporated netting as a novel perimeter-based management tactic to intercept stored product insects around food facilities. Presented by RW, P-IE Student Competition Poster. Entomology 2020: Virtual National Meeting of the Entomological Society of America, Nov. 11-25, 2020.
 78. Zhu K. Y., Developing molecular strategies for insect pest management. Department of Entomology, Pennsylvania State University, State College, PA. Sep. 25, 2020 (Virtual seminar, **INVITED**).
 79. Zhu K. Y., Developing molecular strategies for insect pest management. Department of Entomology, Kansas State University, Manhattan, KS. Feb. 18, 2020 (**INVITED**).
 80. 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 α subunit (*TcsGC α*) gene in the red flour beetle, *Tribolium castaneum*. Poster presented by MR, the Kansas State University Undergraduate Research Symposium, Manhattan, KS. Dec. 10, 2019.
 81. 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, Member Symposium: Arthropod-Vertebrate Molecular Interactions and Pathogen Emergence. Entomology 2019: National Meeting of the Entomological Society of America, St. Louis, MO. Nov. 17-20, 2019 (**INVITED**).
 82. 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, Entomology 2019: National Meeting of the Entomological Society of America, St. Louis, MO. Nov. 17-20, 2019.
 83. 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, Entomology 2019: National Meeting of the Entomological Society of America, St. Louis, MO. Nov. 17-20, 2019.
 84. 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, Entomology 2019: National Meeting of the Entomological Society of America, St. Louis, MO. Nov. 17-20, 2019.
85. 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, Entomology 2019: National Meeting of the Entomological Society of America, St. Louis, MO. Nov. 17-20, 2019.
 86. 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, Insect Group Meeting, Department of Biochemistry and Biophysics, Kansas State University, Manhattan, KS. Oct. 25, 2019.
 87. Zhu K. Y., RNAi and potential in pest management. Copesan Technical Committee Meeting, Kansas State University, Manhattan, KS. Sep. 24, 2019 (**INVITED**).
 88. 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, the Second International Conference on Insect Pest Management, Guiyang, China. July 26-29, 2019.
 89. 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, the Second International Conference on Insect Pest Management, Guiyang, China. July 26-29, 2019.
 90. Shi X., Liu Y., Liu X., Zhu K. Y., Zhang J., Clathrin-dependent phagocytosis plays a predominant role in uptake of double-stranded RNA in hemolymph of *Locusta migratoria*. Presented by XS, the Second International Conference on Insect Pest Management, Guiyang, China. July 26-29, 2019.
 91. 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, the Second International Conference on Insect Pest Management, Guiyang, China. July 26-29, 2019 (**INVITED**).
 92. 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, the Second International Conference on Insect Pest Management, Guiyang, China. July 26-29, 2019 (**INVITED**).
 93. Silver K., Featherston K., Cooper A. M. W., Park Y., Zhu K. Y., Novel strategies for enhancing RNAi in pest insects. Presented by KS, the Second International Conference on Insect Pest Management, Guiyang, China. July 26-29, 2019 (**INVITED**).
 94. 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, the Second International Conference on Insect Pest Management, Guiyang, China. July 26-29, 2019 (**INVITED**).
 95. 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, the Research Symposium of the Research and Extension Experiences for Undergraduate (REEU) Program, Kansas State University, Manhattan, KS. July 25, 2019.
 96. Zhu K. Y., Cooper A. M. W., Song H., Yu Z., Zhang J., Silver K., Mechanisms affecting RNAi efficiency in insects. Presented by KYZ, the Symposium on Insect RNAi Mechanisms and Physiology, Shanxi University, Taiyuan, China. July 22-25, 2019 (**INVITED**).
 97. Silver K., Featherston K., Park Y., Zhu K. Y., The ins and outs of systemic RNAi in insects. Presented by KS, the Symposium on Insect RNAi Mechanisms and Physiology, Shanxi University, Taiyuan, China. July 22-25, 2019 (**INVITED**).
 98. 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 AMWC, the Symposium on Insect RNAi Mechanisms and Physiology, Shanxi University, Taiyuan, China. July 22-25, 2019 (**INVITED**).

99. 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, the Symposium on Insect RNAi Mechanisms and Physiology, Shanxi University, Taiyuan, China. July 22-25, 2019 (**INVITED**).
100. 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 by FXBA, the ASABE Annual International Meeting, Boston, MA. July 7-10, 2019.
101. 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, the 12th Arthropod Genomics Symposium at Kansas State University, Manhattan, KS. June 12-14, 2019.
102. 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, the 12th Arthropod Genomics Symposium at Kansas State University, Manhattan, KS. June 12-14, 2019.
103. 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, the 12th Arthropod Genomics Symposium at Kansas State University, Manhattan, KS. June 12-14, 2019.
104. 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, the 12th Arthropod Genomics Symposium, Kansas State University, Manhattan, KS. June 12-14, 2019.
105. Featherston K., Park Y., Zhu K. Y., Silver K., Characterizing exosomes derived from a *Diabrotica* cell line. Presented by KF, the 74th ESA North Central Branch Meeting, Cincinnati, OH. Mar. 17-20, 2019.
106. 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.
107. 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.
108. 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.
109. 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.
110. 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**).
111. 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.
112. 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)**.
113. 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.
 114. Zhu K. Y., Developing molecular strategies for insect pest management. Department of Biological Sciences, Wichita State University, Wichita, KS. Oct. 8, 2018 **(INVITED)**.
 115. 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)**.
 116. 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.
 117. 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 73rd ESA North Central Branch Meeting, Madison, WI. Mar. 18-21, 2018.
 118. 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)**.
 119. 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)**.
 120. 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.
 121. 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.
 122. 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.
 123. 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 21st 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)**.
 124. 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)**.
 125. 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.

126. 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**).
127. Zhu K. Y., The path to scientific publication. The Department of Pesticides, Nanjing Agricultural University, Nanjing, China. July 9, 2017 (**INVITED**).
128. 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**).
129. 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**).
130. 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.
131. 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**).
132. 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.
133. 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.
134. 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**).
135. 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 72nd ESA North Central Branch Meeting, Indianapolis, IN. June 4-7, 2017.
136. 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**).
137. Barkoviak H., Zhu K. Y., Silver K., Evaluation of several genes as targets for RNAi in German cockroach. Presented by RW at the Undergraduate Research Symposium, Department of Entomology, Kansas State University, Manhattan, KS. Nov. 16, 2016.
138. Wilkins R., Zhu K. Y., Silver K., Evaluation of several genes as targets for RNAi in German cockroach. Presented by RW at the Undergraduate Research Symposium, Department of Entomology, Kansas State University, Manhattan, KS. Nov. 16, 2016.
139. 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**).
140. 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**).

141. 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**).
142. 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.
143. 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.
144. Zhu K. Y., Mechanisms of double-stranded RNA uptake in major insect pests. USDA/NIFA Project Director Meeting. Orlando, FL. Sep. 24, 2016.
145. 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**).
146. 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**).
147. 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.
148. 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.
149. 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.
150. 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**).
151. 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**).
152. Zhu K. Y., The path to scientific publication. Institute of Applied Biology, Shanxi University, Taiyuan, Shanxi Province, China. June 22, 2015 (**INVITED**).
153. Zhu K. Y., The path to scientific publication. College of Agriculture, Shanxi Agricultural University, Taigu, Shanxi Province, China. June 19, 2015 (**INVITED**).
154. 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 70th ESA North Central Branch Meeting, Manhattan, KS. May 31-June 3, 2015 (**INVITED**).
155. 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 70th ESA North Central Branch Meeting, Manhattan, KS. May 31-June 3, 2015
156. Zhu K. Y., Mechanisms of double-stranded RNA uptake in major insect pests. USDA/NIFA Project Director Workshop. Washington, DC. Apr. 28-29, 2015.

157. 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.
158. 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**).
159. 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 62nd National Annual Meeting of the Entomological Society of America, Portland, OR. Nov. 16-19, 2014 (**INVITED**).
160. 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 62nd National Annual Meeting of the Entomological Society of America, Portland, OR. Nov. 16-19, 2014.
161. 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**).
162. 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.
163. 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**).
164. Zhu K. Y., RNA interference: Applications in insecticide toxicology. The 1st International Symposium on Insecticide Toxicology, Guangzhou, China. Aug. 5-7, 2014 (**INVITED**).
165. 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 1st International Symposium on Insecticide Toxicology, Guangzhou, China. Aug. 5-7, 2014 (**INVITED**).
166. Zhu K. Y., RNA interference: Applications in entomological research. Shanxi University, Taiyuan, China. Aug. 1, 2014 (**INVITED**).
167. Zhu K. Y., RNA interference: Applications in entomological research. Zhejiang University, Hangzhou, China. July. 30, 2014 (**INVITED**).
168. 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.
169. Zhu K. Y., RNA interference: Applications in entomological research. Chemistry Seminar Series, Monsanto Company, Chesterfield, MO. Apr. 10, 2014 (**INVITED**).
170. 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.
171. 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.
172. 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**).

173. 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)**.
174. Zhu K. Y., Insect pest management in modern agriculture: Challenges and innovative solutions. The 4th 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)**.
175. 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 68th ESA North Central Branch Meeting in Rapid City, SD, June. 16-19, 2013.
176. 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)**.
177. 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)**.
178. 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 60th National Annual Meeting of the Entomological Society of America, Knoxville, TN. Nov. 11-14, 2012 **(INVITED)**.
179. 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 60th National Annual Meeting of the Entomological Society of America, Knoxville, TN. Nov. 11-14, 2012.
180. 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 60th National Annual Meeting of the Entomological Society of America, Knoxville, TN. Nov. 11-14, 2012.
181. Willmott A. L., Cloyd R. A., Zhu K. Y., Pesticide mixtures and western flower thrips, *Frankliniella occidentalis*. Presented by ALW at the 60th National Annual Meeting of the Entomological Society of America, Knoxville, TN. Nov. 11-14, 2012.
182. 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 60th National Annual Meeting of the Entomological Society of America, Knoxville, TN. Nov. 11-14, 2012.
183. Zhu K. Y., Delivery of dsRNA through nanoparticles. Program Symposium- RNAi: From Basic Science toward Global Application, the 60th National Annual Meeting of the Entomological Society of America, Knoxville, TN. Nov. 11-14, 2012 **(INVITED)**.
184. 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 60th National Annual Meeting of the Entomological Society of America, Knoxville, TN. Nov. 11-14, 2012.
185. 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.
186. 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)**.
187. 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.
188. 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)**.
 189. Zhang X., Michel K., Zhu K. Y., Explore new insecticidal site targeting on chitin synthesis enzymes in *Anopheles gambiae*. Presented by XZ at the 244th American Chemical Society National Meeting, Philadelphia, PA. Aug. 19-23, 2012.
 190. 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)**.
 191. 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)**.
 192. Zhu K. Y., Insecticide metabolism. Institute of Applied Biology, Shanxi University, Taiyuan, China. June 11, 2012 **(INVITED)**.
 193. 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 67th annual meeting of the North Central Branch of the ESA, Lincoln, NE. June 3-6, 2012.
 194. 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 67th annual meeting of the North Central Branch of the ESA, Lincoln, NE. June 3-6, 2012.
 195. 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)**.
 196. 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)**.
 197. 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 17th K-State Research Forum, Manhattan, KS. Mar. 8, 2012.
 198. 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 59th Annual Meeting of the ESA, Reno, NV. Nov. 13-16, 2011.
 199. 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 59th Annual Meeting of the ESA, Reno, NV. Nov. 13-16, 2011.
 200. 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 9th Ecological Genomics Symposium, Kansas City, MO. Nov. 4-6, 2011.
 201. 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)**.
 202. 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)**.
 203. 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)**.

204. Zhu K. Y., Two insect acetylcholinesterases: Insights into novel functions and prospect as selective insecticide target. The 3rd 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**).
205. Zhu K. Y., Comparative genomic analysis of chitinase and chitin synthase gene families from *Anopheles gambiae*. The 3rd 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**).
206. 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**).
207. 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.
208. 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.
209. 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.
210. 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**).
211. 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**).
212. 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**).
213. 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 5th Annual Arthropod Genomics Symposium, Kansas City, MO. June 9-12, 2011.
214. 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 5th Annual Arthropod Genomics Symposium, Kansas City, MO. June 9-12, 2011.
215. 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 66th ESA North Central Branch Meeting in Minneapolis, MN. Mar. 13-16, 2011.

216. 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 66th ESA North Central Branch Meeting in Minneapolis, MN. Mar. 13-16, 2011.
217. 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**).
218. 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.
219. 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.
220. 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**).
221. 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.
222. 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.
223. 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.
224. 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.
225. 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.
226. 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**).
227. 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**).
228. 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**).
229. 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**).
230. 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, China. July 16, 2010 (**INVITED**).

231. 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 10th International Working Conference on Stored Product Protection, Estoril, Portugal. June 27 - July 2, 2010.
232. 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 4th Annual Arthropod Genomics Symposium, Kansas City, MO. June 10-13, 2010.
233. 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 4th Annual Arthropod Genomics Symposium, Kansas City, MO. June 10-13, 2010.
234. Zhang X., Zhu K. Y., Functional analysis of two chitin synthase genes in African malaria mosquito, *Anopheles gambiae*. A poster presented by XZ at 15th K-State Research Forum, Kansas State University, Manhattan, KS. Apr. 2, 2010.
235. 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 15th K-State Research Forum, Kansas State University, Manhattan, KS. Apr. 2, 2010.
236. 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 65th ESA North Central Branch Meeting in Louisville, KY. Mar. 14-17, 2010.
237. 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 65th ESA North Central Branch Meeting in Louisville, KY. Mar. 14-17, 2010.
238. 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.
239. 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.
240. 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.
241. 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.
242. 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.
243. 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.
244. 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.
245. 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.

246. 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.
247. 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**).
248. 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**).
249. 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**).
250. 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.
251. 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**).
252. 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**).
253. 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**).
254. 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**).
255. 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**).
256. 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 3rd Annual Arthropod Genomics Symposium in Kansas City, MO. June 11-14, 2009.
257. 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 3rd Annual Arthropod Genomics Symposium in Kansas City, MO. June 11-14, 2009.
258. 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 3rd Annual Arthropod Genomics Symposium in Kansas City, MO. June 11-14, 2009.
259. 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 3rd Annual Arthropod Genomics Symposium in Kansas City, MO. June 11-14, 2009.
260. 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.
261. 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 85th Annual Meeting of the Kansas (Central States) Entomological Society, Manhattan, KS. Apr. 25, 2009.
262. 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 85th Annual Meeting of the Kansas (Central States) Entomological Society, Manhattan, KS. Apr. 25, 2009.
263. 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 85th Annual Meeting of the Kansas (Central States) Entomological Society, Manhattan, KS. Apr. 25, 2009.
264. 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 85th Annual Meeting of the Kansas (Central States) Entomological Society, Manhattan, KS. Apr. 25, 2009.
265. 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 85th Annual Meeting of the Kansas (Central States) Entomological Society, Manhattan, KS. Apr. 25, 2009.
266. 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 64th ESA North Central Branch Meeting, St. Louis, MO. Mar. 15-18, 2009 **(INVITED)**.
267. 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 64th ESA North Central Branch Meeting, St. Louis, MO. Mar. 15-18, 2009.
268. Zhu K. Y., RNA interference and its prospects in insect pest management. Institute of Insect Sciences, Zhejiang University, China. Jan. 10, 2009 **(INVITED)**.
269. 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)**.
270. 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)**.
271. 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)**.
272. 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.
273. 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.

274. 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)**.
275. 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.
276. 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.
277. 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.
278. 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.
279. 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.
280. Zhu, K. Y., Research in molecular toxicology. Entomology Department Research Blitz Part I. Kansas State University, Manhattan, KS. Oct. 3, 2008.
281. 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.
282. 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.
283. 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.
284. 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 2nd Annual Arthropod Genomics Symposium in Kansas City, MO. April 11-13, 2008.
285. 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)**.
286. 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.
287. 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.

288. 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, Manhattan, KS. Mar. 7, 2008.
289. Zhu K. Y., Insect acetylcholinesterase: An old enzyme gives new challenges and prospects. Zhejiang University, Hangzhou, China. Jan. 6, 2008 (INVITED).
290. Zhu K. Y., Insect acetylcholinesterase: An old enzyme gives new challenges and prospects. Shanxi University, Taiyuan, China. Dec. 27, 2007 (INVITED).
291. 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).
292. 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).
293. Zhu K. Y. Insect acetylcholinesterase: An old enzyme gives new challenges and prospects. China Agricultural University, Beijing, China. Dec. 15, 2007 (INVITED).
294. 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.
295. Ananthakrishnan 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.
296. 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.
297. 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.
298. 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).
299. 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.
300. 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.
301. 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.
302. Zhu K. Y., Insect acetylcholinesterase: An old enzyme gives new challenges and prospects. Mayo Clinic College of Medicine, Rochester, MN. Sep. 7, 2007 (INVITED).
303. 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.

304. 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.
305. 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.
306. 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 1st Annual Arthropod Genomics Symposium, Kansas State University, Manhattan, KS. Apr. 20, 2007.
307. 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 1st Annual Arthropod Genomics Symposium, Kansas State University, Manhattan, KS. Apr. 20, 2007 **(INVITED)**.
308. 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)**.
309. 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.
310. 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.
311. Zhu K. Y. Research progress in insecticide toxicology. Entomology Seminar, Department of Entomology, Kansas State University, Manhattan, KS. Sep. 29, 2006 **(INVITED)**.
312. 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.
313. 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)**.
314. 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)**.
315. 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.
316. 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.
317. 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.

318. 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**).
319. 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**).
320. 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**).
321. 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.
322. 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.
323. 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.
324. 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.
325. 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**).
326. 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.
327. 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**).
328. 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 44th Annual Meeting of the Society of Toxicology, New Orleans, LA. Mar. 6-10, 2005.
329. Zhu K. Y., Mechanism of epithelial chitin synthesis inhibition in mosquitoes. Chitin-Phenoloxidase Group Meeting, Department of Biochemistry, Kansas State University, Manhattan, KS. Mar. 4, 2005.
330. Zhu K. Y. Mechanism of epithelial chitin synthesis inhibition in mosquitoes. KSU-NIH COBRE Program, Department of Anatomy and Physiology, Kansas State University, Manhattan, KS. Feb. 25, 2005.
331. 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 11th *Diabrotica* Subgroup Meeting (10th EPPO *Ad Hoc* Panel and FAO Network Group), Bratislava, Slovak Republic. Feb. 14-17, 2005.
332. 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, CA. Feb. 6-10, 2005.
333. 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**).

334. 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.
335. 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 228th American Chemical Society National Meeting, Philadelphia, PA. Aug. 22-26, 2004 (**INVITED**).
336. Mahroof R. M., Subramanyam Bh., Zhu K. Y., Relative susceptibility of *Tribolium castaneum* (Herbst) exposed to elevated temperatures. Presented by MRM at the 75th Annual Meeting of the Rocky Mountain Conference of Entomologists, Colorado Springs, CO. Aug. 1-5, 2004.
337. 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 15th International Plant Protection Congress, Beijing, China. May 11-16, 2004.
338. 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 15th International Plant Protection Congress, Beijing, China. May 11-16, 2004.
339. 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 136th Kansas Academy of Science Annual Meeting, Kansas City, MO. Apr. 16-17, 2004.
340. 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 136th Kansas Academy of Science Annual Meeting, Kansas City, MO. Apr. 16-17, 2004.
341. 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 9th Annual Kansas State University Graduate Research Forum, Manhattan, KS. Apr. 16, 2004.
342. 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 59th ESA North Central Branch Annual Meeting, Kansas City, MO. Mar. 28-31, 2004.
343. 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 59th ESA North Central Branch Annual Meeting, Kansas City, MO. Mar. 28-31, 2004.
344. 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 59th ESA North Central Branch Annual Meeting, Kansas City, MO. Mar. 28-31, 2004.
345. 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 59th ESA North Central Branch Annual Meeting, Kansas City, MO. Mar. 28-31, 2004.
346. Zhu K. Y., Insecticide resistance: Occurrence, mechanism, and detection. Institute of Zoology, Chinese Academy of Sciences, Beijing, China. Mar. 16, 2004 (**INVITED**).
347. Zhu K. Y., Insecticide resistance: Occurrence, mechanism, and detection. College of Agriculture and Biotechnology, Zhejiang University, Hangzhou, China. Nov. 24, 2003 (**INVITED**).
348. 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.

349. 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**).
350. 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**).
351. 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.
352. 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.
353. 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.
354. 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.
355. 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.
356. 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: Pyralidae). Presented by SM at the Annual Meeting of the ESA, Cincinnati, OH. Oct. 26-29, 2003.
357. 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**).
358. Zhu K. Y. Insecticide resistance: Occurrence, mechanism, and detection. The Hartz Mountain Corporation, Bloomfield, NJ. Sep. 25, 2003 (**INVITED**).
359. 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.
360. 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 79th Annual Meeting of the Kansas (Central States) Entomological Society, Manhattan, KS. Apr. 19, 2003.
361. 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 79th Annual Meeting of the Kansas (Central States) Entomological Society, Manhattan, KS. Apr. 19, 2003.
362. 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.
363. 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**).

364. 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.
365. 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.
366. 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 25th Sunflower Research Forum of the National Sunflower Association, Fargo, ND. Jan. 16-17, 2003.
367. 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 23rd Annual Meeting, Salt Lake City, UT. Nov. 16-20, 2002.
368. 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.
369. 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.
370. Hartzer 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.
371. 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.
372. Mohandass S., Arthur F. H., Zhu K. Y., Modeling the population dynamics and effects of (S)-hydroprone 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.
373. 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.
374. Zhu K. Y., Molecular basis of insect-pesticide interactions. Entomology Seminar, Department of Entomology, University of Missouri, Columbia, MO. May 3, 2002 (**INVITED**).
375. 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**).
376. 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.
377. 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.

378. 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.
379. 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.
380. 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.
381. 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.
382. 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.
383. 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.
384. Zhu K. Y., Altered acetylcholinesterase conferring insecticide resistance in insects. College of Plant Protection, China Agricultural University, Beijing, China. Oct. 31, 2001 (**INVITED**).
385. 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**).
386. Zhu K. Y., Altered acetylcholinesterase conferring insecticide resistance in insects. Institute of Zoology, Chinese Academy of Sciences, Beijing, China. Oct. 30, 2001 (**INVITED**).
387. Zhu K. Y., Biochemical and molecular studies of insect-pesticide interactions. Institute of Zoology, Chinese Academy of Sciences, Beijing, China. Oct. 30, 2001 (**INVITED**).
388. 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**).
389. 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**).
390. Zhu K. Y., Biochemical and molecular studies of insect-pesticide interactions. Shanghai Institute of Pesticides, Shanghai, China. Oct. 23, 2001 (**INVITED**).
391. Zhu K. Y., Altered acetylcholinesterase conferring insecticide resistance in insects. Shanghai Institute of Entomology, Chinese Academy of Sciences, Shanghai, China. Oct. 22, 2001 (**INVITED**).
392. Zhu K. Y., Altered acetylcholinesterase conferring insecticide resistance in insects. College of Plant Protection, Nanjing Agricultural University, Nanjing, China. Oct. 19, 2001 (**INVITED**).
393. Zhu K. Y., Biochemical and molecular studies of insect-pesticide interactions. College of Plant Protection, Nanjing Agricultural University, Nanjing, China. Oct. 19, 2001 (**INVITED**).
394. 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.

395. 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.
396. 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**).
397. 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**).
398. 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**).
399. 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.
400. 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.
401. 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.
402. 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.
403. 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.
404. 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.
405. 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.
406. 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.
407. Zhu K. Y., Insects used in environmental toxicology research. Manhattan Elementary Gifted Education Program, Manhattan, KS. Nov. 3, 2000 (**INVITED**).
408. 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.

409. Wilde G. E., Whitworth R. J., Shufuran 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.
410. 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.
411. 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.
412. 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.
413. 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.
414. 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 76th Annual Meeting of the Kansas (Central States) Entomological Society, Emporia, KS. Apr. 15, 2000.
415. 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 76th Annual Meeting of the Kansas (Central States) Entomological Society, Emporia, KS. Apr. 15, 2000.
416. 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**).
417. 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**).
418. 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**).
419. Perez-Mendoza J., Fabrick J. A., Zhu K. Y., Baker J. E., Alterations in esterases are associated with malathion resistance in *Habrobracon hebetor* (Hymenoptera: Braconidae). A poster presented by JPM at the Annual Meeting of the ESA, Atlanta, GA. Dec. 12-16, 1999.
420. Yang X.-M., Margolies D. C., Zhu K. Y., Buschman L. L., Effects of host plants on the susceptibility to insecticides and on detoxification enzymes in the twospotted spider mite. A poster presented by XMY at the Annual Meeting of the ESA, Atlanta, GA. Dec. 12-16, 1999.
421. 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 Annual Meeting of the ESA, Atlanta, GA. Dec. 12-16, 1999.
422. Zhu K. Y., Wilde G. E., Sloderbeck P. E., Buschman L. L., Higgins R. A., Shufuran R. A., Whitworth R. J., He F., Starkey S. R., Evidence of evolving carbaryl resistance in western corn rootworm in Kansas. Entomology Research/Extension Update-99. Department of Entomology, KSU, Manhattan, KS. Nov. 22-23, 1999.

423. Yang X.-M., Margolies D. C., Zhu K. Y., Buschman L. L., Effects of host plants on the susceptibility of *Tetranychus urticae* Koch (Acari: Tetranychidae) to selected pesticides in relation to the change of some detoxification enzymes. Entomology Research/Extension Update-99. Department of Entomology, KSU, Manhattan, KS. Nov. 22-23, 1999.
424. Zhu K. Y., Altered acetylcholinesterase conferring insecticide resistance in insects. Department of Entomology, University of Nebraska, Lincoln, NE. Nov. 9, 1999 (**INVITED**).
425. Zhu K. Y., Multiple mechanisms conferring organophosphate resistance in greenbugs. Department of Plant Protection, Zhejiang University, Hangzhou, China. Aug. 31, 1999 (**INVITED**).
426. Yang X., Zhu K. Y., Margolies D. C., Buschman L. L., Decrease of susceptibility to insecticides associated with increase of esterase activity in insecticide-selected Banks grass mites. A poster presented by XY at the 75th Annual Meeting of the Kansas (Central States) Entomological Society, Manhattan, KS. Apr. 30 - May 1, 1999.
427. Gao J.-R., Zhu K. Y., Insecticide structure and toxicity relationship in organophosphate- susceptible and resistant greenbugs, *Schizaphis graminum* (Homoptera: Aphididae). A poster presented by JRG at the 75th Annual Meeting of the Kansas (Central States) Entomological Society, Manhattan, KS. Apr. 30 - May 1, 1999.
428. Zhu K. Y., Altered acetylcholinesterase conferring insecticide resistance in insects. Biochemistry seminar. Department of Biochemistry, Kansas State University, Manhattan, KS. Apr. 26, 1999 (**INVITED**).
429. Lydy M. J., Zhu K. Y., Siegfried B. D., Evaluating the effects of pesticide mixtures to aquatic organisms: Mechanisms of synergistic toxicity. Presented by MJL at Kansas EPSCoR Annual Conference, Topeka, KS. Apr. 1, 1999.
430. Zhu K. Y., Oppert B. S., Baker J. E., Serine proteinases as potential targets for insect control. A poster presented by BSO at 1999 Symposium of the Consortium for Plant Biotechnology Research, Inc., Washington, DC. Mar. 2-3, 1999 (**INVITED**).
431. Zhu K. Y., Two esterase-based techniques for resistance monitoring in greenbugs. Entomology Research/Extension Update-98. Department of Entomology, KSU, Manhattan, KS. Nov. 24, 1998.
432. Zhu K. Y., Multiple mechanisms conferring organophosphate resistance in greenbugs. Department of Entomology, Kansas State University, Manhattan, KS. Nov. 20, 1998 (**INVITED**).
433. Wilde G. E., Buschman L. L., Zhu K. Y., Shufran R. A., Sloderbeck P. E., Higgins R. A., Whitworth R. J., Areawide management of corn rootworm in Kansas during 1998. A paper presented by GEW at the Joint Annual Meeting of the ESA and APS, Las Vegas, NV. Nov. 8-12, 1998.
434. Yang X., Zhu K. Y., Margolies D. C., Buschman L. L., Susceptibility of twospotted spider mite and Banks grass mite to three selected insecticides. A poster presented by XY at the Joint Annual Meeting of the ESA and APS, Las Vegas, NV. Nov. 8-12, 1998.
435. Gao J.-R., Zhu K. Y., Insecticide structure and toxicity relationship in organophosphate- susceptible and resistant greenbugs, *Schizaphis graminum* (Homoptera: Aphididae). A poster presented by JRG at the Joint Annual Meeting of the ESA and APS, Las Vegas, NV. Nov. 8-12, 1998.
436. He F., Zhu K. Y., Comparisons of esterase profiles and substrate specificity between organophosphate-susceptible and resistant clones of the greenbug (*Schizaphis graminum*). A poster presented by KYZ at the Joint Annual Meeting of the ESA and APS, Las Vegas, NV. Nov. 8-12, 1998.
437. Zhu K. Y., Gao J.-R., Northern blot analysis of esterases and acetylcholinesterase in organophosphate-susceptible and resistant greenbugs (*Schizaphis graminum*). A poster presented by KYZ at the Joint Annual Meeting of the ESA and APS, Las Vegas, NV. Nov. 8-12, 1998.
438. Wilde G. E., Whitworth R. J., Shufran R. A., Zhu K. Y., Sloderbeck P. E., Higgins R. A., Buschman L. L., Corn rootworm areawide management program in Kansas. A paper presented by GEW at the Corn

Rootworm Areawide Management Program 1988 Annual Meeting, Minneapolis, MN. Oct. 13-15, 1998.

439. Yang X., Zhu K. Y., Margolies D. C., Buschman L. L., Susceptibility of two species of spider mites to three selected insecticides. A poster presented by XY at the 74th Annual Meeting of Kansas (Central States) Entomological Society, Lincoln, NE. Apr. 24-25, 1998.
440. Wilde G. E., Whitworth R. J., Shufran R. A., Zhu K. Y., Sloderbeck P. E., Higgins R. A., Buschman L. L., Corn rootworm areawide management program in Kansas. A paper presented by GEW at the ESA North Central Branch Meeting, Sioux Falls, SD. Mar. 7-10, 1998.
441. Baker J. E., Fabrick J. A., Zhu K. Y., Malathion carboxylesterase in the pteromalid parasitoid *Anisopteromalus calandrae*. A poster presented by JEB at the Annual Meeting of the ESA, Nashville, TN. Dec. 14-18, 1997.
442. Gao J.-R., Zhu K. Y., Wilde G. E., Purification and characterization of acetylcholinesterase from western corn rootworm, *Diabrotica virgifera virgifera* (Coleoptera: Chrysomelidae). A poster presented by KYZ at the Annual Meeting of the ESA, Nashville, TN. Dec. 14-18, 1997.
443. Guedes R. N. C., Zhu K. Y., Kambhampati S., Dover B. A., Kinetic and inhibitory properties of acetylcholinesterase purified from organophosphate-susceptible and resistant populations of the lesser grain borer, *Rhyzopertha dominica* (Coleoptera: Bostrichidae). A poster presented by RNCG at the Annual Meeting of the ESA, Nashville, TN. Dec. 14-18, 1997.
444. Zhu K. Y., Shufran R. A., Whitworth R. J., Higgins R. A., Wilde G. E., Sloderbeck P. E., Buschman L. L., Susceptibility of field-collected western corn rootworm beetles to selected insecticides in Kansas. A poster presented by KYZ at the Annual Meeting of the ESA, Nashville, TN. Dec. 14-18, 1997.
445. Gao J.-R., Zhu K. Y., Wilde G. E., Characterization of acetylcholinesterase from corn rootworm. Entomology Research/Extension Update-97, Department of Entomology, KSU, Manhattan, KS. Nov. 20, 1997.
446. Zhu K. Y., Nicotinic acetylcholine receptor as the target site of imidacloprid and initial cloning of the receptor from the greenbug. Entomology Research/Extension Update-97, Department of Entomology, KSU, Manhattan, KS. Nov. 20, 1997.
447. Wilde G. E., Shufran R., Whitworth J., Higgins R. A., Zhu K. Y., Buschman L. L., Sloderbeck P. E., Areawide management: A new approach for corn rootworms. Presented by GEW, Department of Entomology, KSU, Manhattan, KS. Oct. 10, 1997 (**INVITED**).
448. Zhu K. Y., Molecular analysis and detection of a point mutation of acetylcholinesterase conferring azinphosmethyl resistance in Colorado potato beetle. Young Scientists Recognition Symposium, 213th American Chemical Society National Meeting, San Francisco, CA. Apr. 13-17, 1997 (**INVITED**).
449. Zhu K. Y., Inter- and intra-strain variations of esterase and acetylcholinesterase activities in organophosphate-susceptible and resistant greenbugs. A poster presented at the Annual Meeting of the ESA, Louisville, KY. Dec. 8-12, 1996.
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