

CURRICULUM VITAE

Judith K. Brown

Regents Professor

School of Plant Sciences

The University of Arizona

Phone: 520-621-1402/Fax: 520-621-8839

Email: jbrown@ag.arizona.edu

ORCID: 0000-0003-4669-8443

Education and Training

Texas A & M University	Horticulture; Minor Plant Pathology	B.S. May 1979
Washington State University	Plant Pathology-Virology	M.S. May 1981
University of Arizona	Plant Pathology-Virology	Ph.D. Dec 1984
University of Arizona	Plant Pathology-Virology	Post-Doctoral 1985

Research and Professional History

2020-present Regents Professor

2004-present: Professor, School of Plant Sciences; Joint Professor, Department of Entomology, University of Arizona; UAMicrobiology Faculty

1999-2004: Associate Professor, Department of Plant Sciences, University of Arizona

1998-1999: Associate Research Professor, Department of Plant Sciences, University of Arizona

1990-1998: Assistant Research Professor, Department of Plant Sciences, University of Arizona

CALS & University-Wide Programs

Microbiology 2006-present

Faculty, BIO5-University of Arizona 2006-present

Center for Insect Sciences Faculty 2004-2020; Insect Sciences 1996-2010; Exec.Comm 2004-08

Institute of the Environment-University of Arizona 2012-present

UA Institute for Energy Solutions Faculty 2016-present

Undergraduate Honors Program Mentor 1997-present

Arizona Assurance Undergraduate Mentor 2009-2012

Research Program Focus Areas

The Brown lab conducts research that focuses on elucidation of (1) emergent plant viral pathogens and phylodynamics at the crop-wild host interface, (2) virus-insect vector transmission specificity using reverse genetics to probe mechanisms involved in these co-evolved pathosystems, and (3) relationships between virome-phytomicrobiome communities and prospective beneficial viruses. What we learn is applicable to abatement of emerging diseases through the application of new knowledge about the pathosystem, to guide management of pathogen-arthropod vector complexes, with specific interest in deploying RNA-interference for hemipteran vectors, and *in planta* molecular circuits for virus surveillance (early-warning) and abatement of early-infection processes.

Current Research Projects

- Emerging plant DNA virus-vector complexes: biology, -omics discovery sequencing, and phylodynamics at the crop-wild host plant interface
- Phylogeography, gene flow, and evolution of the *Bemisia tabaci* cryptic species
- Biology & functional genomics of begomovirus-whitefly transmission specificity
- Effectors involved in psyllid vector -'Ca.' Liberibacter invasion and propagative transmission

- dsRNA biopesticides for management of hemipteran vector/pathogen complexes
- *Vampirovibrio chlorellavorus*-*Chlorella* spp. pathogenicity determinants and virus-like elements <https://jgi.doe.gov/csp-2019-host-pathogen-interactions-chlorella>
- Plant viral partners within the phytomicrobiome

Websites:

<https://jkbrownlab.arizona.edu/>

<https://jkbrownlab.arizona.edu/citrus-greening>

<https://extension.arizona.edu/witches-broom-blue-palo-verde>

Honors and Awards

2021 University of Arizona, Regents Professor <https://universityevents.arizona.edu/outstanding-faculty/judith-brown>

2020 APS Excellence in International Service Award https://www.apsnet.org/members/give-awards/awards/Pages/2020_JudithBrown.aspx

2019 UA College of Agriculture, Research Faculty of the Year

2017 Fulbright Specialist 2017-2018 [Eligible 2017-2021]

2015 Fellow, American Association for the Advancement of Science

2011 Fellow, American Phytopathological Society

2010 USDA-NIFA Partnership Award–National Plant Diagnostics Network

2009 Excellence in Multistate Research Award-W1150 WAAESD

2008 Wellman Award-Professional Achievement and Leadership, APS-Caribbean Division

2007 Kansas State University ADVANCE Distinguished Lecturer

2005 ESCOP/ACOP Leadership Development Program-Class 14

2005 Washington State University, Women’s Professional & Academic Leadership Award

Professional Societies

International Women’s Leadership Association 2016-2018

American Association for Advancement of Science 1989-present

American Society for Microbiology 2002-2005

American Society for Virology 1998-2012

Entomological Society of America 1990-present

American Phytopathological Society 1982-present; Division member Caribbean and Pacific

American Phytopathological Society Offices

Caribbean Division, Vice President 2020; **President 2021-2022**

Pacific Division, Vice President 2013; President 2014

Caribbean Division, Vice President 2012; President 2013

International Relations Committee, Vice Chair, 2012, Chair 2013-2016

Office of International Programs 1996-1999; 1995-2002; 2009-2013

Caribbean Division Councilor 2002-2005; 2007-2008

Councilor’s Forum 2002-2005

APS Subject Committees: National Plant Disease Recovery 2010-present; Virology (1998-present; Chair, 2004); Emerging Pathogens 2004-present; Pathogen-Vector Interactions (founding Chair; Chair 2010-2012; member 2010-present)

Editorial-APS

Senior Editor, APS Press (2007-2013)

Associate Editor, Plant Disease (2007-2009)

Associate Editor, Phytopathology (2000-2003)

Reviewer, multiple journals (1986-present)

International Contributions:

Brown is considered a world authority on emerging whitefly-transmitted viruses and whitefly *Bemisia tabaci* cryptic species biological and genetic/genomic relationships and how differences may influence the emergence and spread of begomoviruses. She continues to research the phylodynamics of emergent begomoviruses of cotton-vegetable systems e.g. host-shifting, recombination, reassortment using next generation 'discovery' DNA sequencing and probe capture sequencing, providing support to cotton breeding programs in Pakistan through genomic characterization of cotton leaf curl disease complex. Other current international research involves discovery and characterization of the emerging badnaviruses complex transmitted by mealybugs that are associated with Cacao swollen shoot disease, and since ~2000 have resulted in losses in cacao production in West Africa (Cote d'Ivoire, Ghana, Nigeria, Sierra Leon), and the potential use of dsRNA biopesticides to control Citrus greening disease caused by psyllid-transmitted obligate *Ca. Liberibacter asiaticus*. Recently her lab has reported the introduction of the exotic *Cotton leafroll dwarf virus*, apparently endemic to Africa and Asia, into the U.S. Cotton Belt using 'RNAseq discovery' and has co-identified *Cotton leaf curl Gezira virus* in okra plants in Texas (2019), respectively. She has visited, lectured, and studied emerging diseases in more than 65 countries, and carries out collaborative research in Asia (China, India, Pakistan, Uzbekistan), East and West Africa, the Middle East-Arabian Peninsula (Egypt, Jordan, Iran, Iraq, Lebanon, Saudi Arabia, Yemen) and American Tropics (Mexico and Central and South America). The Brown lab has hosted over 65 visiting scholars or graduate students from 30+ countries on fellowships from home country universities or ministries, Borlaug, Fulbright, and Humphrey programs from US, the Higher Education Commission of Pakistan, and Indo-US Science and Technology Forum, among others.

International Outreach

- 1989** USAID-Antigua –Short Course Plant Virus Diagnostics (co-taught with P. Jones, UK, CABI)
- 1990-1991** USAID-Dominican Republic/U-Puerto Rico (PI: Dr. Julio Bird). Etiology and management of emergent whitefly-begomoviruses in tomato/pepper crops; molecular detection; system management.
- 1991** CATIE-Taught short course in molecular plant virus diagnostics involving pathologists from the Ministry of Agriculture from twelve countries (co-taught with R. Lastra, CATIE virologist)
- 1994** Spain: Murcia/Almeria-Consultant on melon and tomato begomovirus diseases; B biotype whitefly crisis (Consultant; speaker)
- 1996-2004** US Egypt Joint Science and Technology Board; multiple projects with Egyptian investigators
- 1998** Seminis Seed, Brazil-Consultant, research, diagnostics and dynamics of emergent tomato begomoviruses/B biotype introduction (Consultant and Speaker)
- 2002** FAO Consultant, Panama. Dynamics of emerging begomoviruses in tomato crop/B biotype; investigate phosphorous treatments for outbreak management (Lead; collaborator Dr. Kathy Taylor, plant physiologist).
- 2002-2005** US-Israel Cooperative Development Research Program: Identification and management of whitefly-transmitted geminiviruses in cassava in southern Africa and development of cassava resistant lines. PI H. Czosnek; co-PIs: MEC Rey, JK Brown. Project TA-MOU-02-C22-003 U-WITS South Africa, INIA Mozambique
- 2004** National Academies of Science delegate to Israeli-Arab Science Forum, Ankara, Turkey
- 2005-07** ENZA Zaden; new and emergent tomato begomoviruses in Sonora (Lead: plant virus expert; advisor and causality investigator with ENZA team).
- 2006** Syngenta-Culiacan, Sinaloa Mexico- Research to identify new and emergent tomato begomoviruses
- 2006** Asociacion Productores-Melons and Tomato, Sonora-Research and outreach to identify new and emergent begomovirus-whitefly complexes and knowledge-based management
- 2007** Asociacion Productores-Melons and Tomato, Sonora- emergent begomovirus-whitefly complexes and knowledge-based management (Speaker and consultant visitation)
- 2009** Whitefly-transmitted viruses; INIA and University of Tarapaca, Chile; Begomovirus-whitefly outbreak in tomato crops irrigation project; identification, management; debriefing presentation.

- 2009** International Rice Institute (CGIAR), Review Panel Pre-Study (Panel member, virology, vector biology).
- 2012** Instructor, short courses in molecular tools for geminivirus identification. King Saud University, Riyadh May 13-16 (Team-taught with A.M. Idris)
- 2013** Phylogenetic analysis workshop for plant virologists. National Plan Science & Technology Workshop, Plant Protection Dept., King Saud University, Riyadh, Saudi Arabia Sept. 15-18 (Team taught with A.M. Idris)
- 2013-2018** USDA-ICARDA Pakistan Cotton leaf curl begomovirus complex, etiology, molecular diagnostics, transgenic resistance, whitefly barcoding-begomovirus phylodynamics.
- 2014-2020** USDA-ARS Cooperative agreement: cacao-infecting badnaviruses in West Africa and Trinidad. Next-Gen Sequencing-discovery (new species); molecular diagnostics development, virus characterization, cooperators: Gene Bank, Trinidad; U-Reading cacao quarantine, CATIE.
- 2015** National Academy of Science Administered Program, US-Egypt Science and Technology Grants US Review Panel (11 proposals); Selection Meeting, Cairo, Egypt. Jan 28-Feb 4.
- 2016-present** Collaborator, MARS sponsored research. Cacao swollen shoot virus complex; NGS-discovery and phylodynamics, species characterization, sampling protocols, molecular diagnostics; workshop organizer and participant. Ground-truthing GIS and drone mapping in Cote d'Ivoire. Collaborators: CNRA-Cote d'Ivoire, CRIG-Ghana, CRIN-Nigeria, IITA-Ibadan Nigeria; ICRAF-CGIAR Nairobi and CI teams; World Cocoa Foundation.
- 2017** Organizer, Speaker: Workshop on Emerging disease of potato associated with potato psyllid-Liberibacter spp. complex; zebra chip of potato, Supported by USDA-FAS, ICTA-Quetzaltenango & Del Valle-Guatemala City, May 13-17 (60 participants; GIS short course Dr. Phil Guertin, UA)
- 2017** Asian Research Conference Symposium Cotton-infecting virus diseases and whitefly. Nagpur, India Sept 16. (Co-organizer and presenter with Dr. Keerti Rathore; ICAC Washington D.C.)
- 2017** Joint Indo-US Science and Technology Forum Co-Organizer (and presenter) with Indian cooperators Punjab Agricultural University, Ludhiana, Punjab State: Curbing whitefly-plant virus pandemics – a departure from pesticides to genomic solutions, Ludhiana, India, Dec 4-5 (Co-organizer and presenter).
- 2018 Workshop** Participant-Guidelines on Sublethal Endpoints in NTO Testing for Non-Bt GE Crops, March 5-6, 2019, Washington D.C.
- 2018** Presenter and project consultant for cacao swollen shoot disease for IITA-kickoff project workshop, Kenema, Sierra Leone “-omics tools for virology-pathology and cacao breeding”. Co-organizer and participant, speaker virology and vector biology, molecular and -omics for diagnostic development.
- 2019-2022** King Saud University, Saudi Arabia; Collaborative grant: Citrus greening disease. HLB qPCR monitoring of pathogen distribution and psyllid vector.
- 2020** National Academy of Sciences, US-Egypt Science and Technology Grants US Review Panel (12 proposals).

Synergistic coordination and outreach activities

Arizona

Arizona Crop Improvement Association-Pure Seed Advisory Committee 2006-present
 AZ-Plant Diagnostic Network, 2004-present; Member and Alternate AZ-Coordinator 2004-2007; Coordinator, AZ-PDN 2008-2020.
 US-Pakistan Collaborative Research: Cotton leaf curl diagnostics/surveillance 2011-2017
 USDA-Pakistan Cotton Improvement Project; Co-PI and Subgroup Chair: virology, whitefly vector, genomic and molecular diagnostic development for detection and monitoring 2013-2016
 UA Biology Team Lead for National Alliance for Algal Biofuels and Bioproducts NAABB consortium 2009-2014; DOE-RAFT DOE RAFT Project, funded by DOE; UA Biology team, in collaboration with Chem. Engineering PI (Ogden) 2014-2018

Regional

WERA 4150 Multi-State Working Group 2019-present (prev. WERA 3150)

WERA Potato viruses Regional Working Group 2018-2020
 Western Region IPM Invasive Species Working Group, Chair and member 2012-2014
 W1150/2150 Bean Germplasm Improvement Committee 2004-2013
 Western Region Working Group on whitefly-transmitted viruses-insect vector subgroup, Chair [WCC-187] 1992-2002

National

DATOC: Data Analytic Tactical Operations Cell management of citrus greening disease (diagnostics, vector, epidemiology; 2017-present [advisory to California Dept Food and Agriculture quarantine]

National Cotton Council Technical Advisory Committee. Cotton leaf roll dwarf virus research and disease management post-introduction to cotton belt 2020-present

Diagnostic Assay Laboratory Network (DALN) Planning Project, August 2020-2022. National working group to establish coordination or strategy for development of diagnostic assays in the US.

National Plant Diagnostic Network (to 2021) Coordinator, Arizona (2008-2020); NPND 2018 Anniversary Meeting Program Committee, Washington D.C.; NPND Protocols Committee 2017-2018; NPND-Diagnostics Committee 2013-2015.

Legume PIPE, AZ Coordinator for regional components 2006-2012

National Bemisia Task Force, Chair - Virus-Vector subgroup 2005-2012

EPA Food Quality Protection Act Science Review Board (FIFRA) 2005-2014

USDA-National Working Group Whitefly-transmitted viruses-insect vector, co-Chair 1990-2012

International

Indo-US Consortium: Functional Begomovirus-Whitefly Genomics Symposium, Ludhiana, Punjab, India 2017.

International Cacao swollen shoot disease West African Working Group, member 2015-present; cacao breeders, pathology/virology, vector biology toward short/long term management of CSSD epidemic.

USAID-IPM CRSP Global Theme co-PI 2005-2014; Liaison-coordinator to W. Africa 2005-2008; USAID IPM CRSP-Caribbean Region LAC 2010-2015; IPM CRSP Global Theme: co-PI, PI-S. Tolin (2010-2015), Liaison-coordinator to E. Africa (2012-2014).

ICTV Geminivirus Taxonomy Study Group, Chair July 2009-Dec 2014; member 1997-2014

ICTV Database Subcommittee-Taxonomy of Viruses 2003-2005

International Whitefly Working Group-European Studies Network: Meeting Core Organizing Committee; member 2002-2016

International Virus Epidemiology Working Group & Working Group on Vegetable & Legume Viruses, member (2000-present)

Plant Sciences - Virus Diagnostic Laboratory, Director (1990-present):

- Genomic discovery and molecular detection of emergent, insect vector-transmitted viruses.
- DNA sequence databases and molecular assays for detection of DNA and RNA plant viruses and viroids of cotton, cucurbits, legumes, malvaceous & solanaceous.
- Molecular detection (PCR-primer suites) for badnavirus detection to aid knowledge-based management in cacao for tropical Americas and West Africa.
- Quarantine plant and non-quarantine surveillance of citrus and Asian citrus psyllids; *Liberibacter asiaticus* (CLAs) by qPCR >7-20,000 leaf and/or psyllid 'sentinel' field surveillance (2016-2023). USDA-APHIS and AZ Dept of Agriculture. NPDRS Certified.
- 'First detections' of plant viruses (APHIS notified; First reports, Plant Disease).
- *B. tabaci* cryptic species mitotyping service; global *B. tabaci* cryptic species group; via *Reference database* (mtCOI), established with 100% verified voucher specimens.

Patents & Applications Filed

Application 63/230,560 / UA21-266. Synthetic RNAs and Uses Thereof. Filed in U.S. Aug. 6, 2021 [JK Brown, MH Mondal, JR Paredes-Montero; USM A. Flynt].

Application 16/370,544 / UA18-056. Transgenic resistance to cotton leaf curl disease using small hairpin RNA to induce RNA interference.. Filed U.S. March 29, 2019.[JK Brown, Muhammad Zia-Ur-Rehman].

EXTRAMURAL FUNDING 1990-current: Total \$19,500,000 [Grants current, bolded*]

[1990-2009 listed **Total ~6,000,000**; 2010-2020 (January) **Total > \$13,500,000**]

- USAID-Guatemala -PROTISA Melon Production and Whitefly Five Year Plan: Special consultant (Dale Krigsvold, VA Tech) on whitefly vector cryptic species (mitotypes); regional survey and initiation of global COI database. 1991-1993.
- NATO International Collaborative Grant. Diversity in begomoviruses of cucurbits from Old and New World sites. \$5,000, 1992. Co-PI: Phil Jones; Rothamsted Experiment Station, UK
- USAID US-Egypt Horticulture Crops Research Initiative; Biotechnology and Whitefly Initiative. Lead: Michigan State. UA PI: J.K. Brown. Plant microbiology/whitefly-transmitted viruses. National Institute for Biotechnology and Genetic Engineering. 1993-1997. \$610,000.
- USDA NRI. Biology and cellular/molecular mechanism of whitefly-mediated transmission of geminiviruses. PI: J.K. Brown; Co-PI R. Rosell. October 1994-September 1996. \$103,000.
- North Carolina State IPM Center. PCR diagnostics to detection of geminivirus and cyclodiene insecticide resistance-related mutation in single whitefly vector populations from vegetable plantings in the SW US and Guatemala. PI, J.K. Brown; Co-PI: R. French Constant (UWiscnsin); Co-PI M. De Mata Palmeri, Del Valle University, Guatemala. 1994-1999. \$75,000.
- USAID Horticultural Crops Technology Transfer Program. Molecular markers and whitefly biotype-geminivirus interactions. Co-PI M. Madkour, AGERI, Giza, Egypt. July 1995-June 1998. \$70,000.
- Cotton Incorporated. Molecular markers for distribution study, geminivirus characterization, and WebSite construction of cotton virus pages. Jan 1995-1998. \$145,000.
- USDA-FAS/OICD. Geminivirus symposium and international/national research exchange program. Hosted International symposium on Geminiviruses, Tucson, AZ June 3-8, 1995. Collaborative research with Mexico. 1995-1998. \$210,000.
- Common Fund for Cotton. Cotton leaf curl virus complex in Pakistan. Emergent whitefly-transmitted begomovirus complex, etiology, characterization, vector relationships, molecular diagnostic tools. PI: J.K. Brown; co-PI: UK John Innes Centre J Stanley, P Markham. 1996-2000. Total: \$900,000. UA, \$478,000.
- FOMENTO. Puerto Rican Economic Development Fund. Molecular and biological characterization of WFT geminiviruses and development of disease resistance. PI: J.K. Brown; Co-PI: J. Bird (UPR, Rio Puerto Rico) and D. Bisaro (OSU). March 1996-2001. Total: \$1,266,168. UA, \$627,618.
- USDA-APHIS-Cooperative Research Agreement. Development of molecular markers for whiteflies. \$85,000. 1996-1998.
- SBIR-USDA Proposal joint with D.M. Bisaro (OSU), with Agritope, Inc (Portland, OR) (Phase I). Engineered geminivirus resistance in tomato. 1997-98. May-Dec 1997; 55K, UA: 4,500.
- BARD-U.S. Cellular sites of geminivirus-vector specificity and virus topologies involved in whitefly-mediated geminivirus transmission. PI, H. Czosnek, Hebrew University of Jerusalem, Rehovot, Israel; Co-PI, J.K. Brown. 1997-1999. \$300,000; UA, \$180,000.
- NSF Training Grant for Plant-Insect Interactions. 1997-1999. PI: L. Bernays, R. Feyereisen, K. Feldman, D. Galbraith, J.K. Brown (team projects funding).
- USDA-OICD/FAS. Distribution of prospective whitefly parasitoid complexes, whitefly biotypes and geminiviruses in Argentina. Co-PI, E. N. Botto. \$19,000, 1999-2000.
- NSF MCB-9729397. Coat protein-whitefly interactions necessary for geminivirus transmission. J.K. Brown, Co-PI, D. Bisaro, OSU. Jan 1997-2000. AZ \$251,000.
- USAID-Whitefly cassava viruses project: Subcontract from IITA for molecular typing of whitefly biotypes in Uganda and East Africa. J. Legg, J.K. Brown. 1999-2000. \$20,000.
- Tomato Growers Association, South Africa for molecular characterization of new tomato-infecting geminiviruses. 1999. \$7,000. US EMBASSY/SOUTH AFRICA USAID Scientific Exchange Program (Partial Travel and lodging for SSAP Conference. 1999. \$2,500.

BSF-US-Israel Research. Allelochemical- and Insecticide-detoxification Genes in *Bemisia tabaci* Using Comparative Genomics. PI: H.Czosnek, co-PIs: J. Hillel, R. Feyereisen, J. K. Brown. 1990-2002. \$300,000.

USAID IPM CRSP, Phase II (1998-2004) Global Theme Supplement. Integrated Management of Insect Vectors and Viruses of Pepper: Primary Deterents to Crop Production in the Eastern Caribbean and Honduras. 1999-2002. \$46,875.

USAID - IPM CRSP. Molecular tracking of whitefly-transmitted geminiviruses. PI: J.K. Brown; Co-PI M. M. Roca de Doyle, Zamorano, Honduras. 2000-2001. \$18,000.

USDA National Biological Control Institute & USDA Cooperative Research Agreement. Molecular markers for mealybug identification and assessing phylogenetic relationships of mealybugs. \$31,000, 2000-2001.

USAID IPM CRSP, Global Theme Supplement. Viral and vector deterents of pepper production in the E Caribbean/ Honduras. PI: S. Tolin, Co-PIs J.K. Brown, F. McDonald, CARDI, Jamaica; M. Roca de Doyle, Zamorano; REDCAHOR Costa Rica; AVRDC, Taiwan. September 2000-2003. UA: \$60,000.

USAID US-Egyptian Research Proposal: Prokaryotic Symbionts of *Bemisia tabaci*: Implications for Novel Control Strategies. UA budget \$25,000/2000-2001. Co-PI, M. Idriss, AGERI, Giza, Egypt.

IPM CRSP Biotechnology Research Activities. Identification, distribution and epidemiology of plant virus pathogens that threaten pepper / tomato and curcubit production in Honduras and Guatemala. PI: R. Martyn (Purdue), Co-PI: J.K. Brown (UA), D. Krigsvold, FHIA, A. Rueda, Zamorano. 2000-2002. \$42,250.

IPM CRSP Biotechnology Research Activities. Molecular identification of viruses of solanaceous and cucurbit crops in Honduras and transgenic resistance to control *Tomato mosaic* and *Pepper golden mosaic* viruses in tomato. PI: R. Martyn (Purdue), Co-PI: J.K. Brown (UA), D. Krigsvold, FHIA, A. Rueda, Zamorano. 2001-2005. UA: \$150,000.

IPM CRSP Biotechnology Research Activities. Identification and management of factors responsible for limiting melon production in Southern Honduras. PI: R. Martyn (Purdue), Co-PI: J.K. Brown (UA), D. Krigsvold, FHIA, A. Rueda, Zamorano. 2002-2006.

USAID IPM CRSP Phase III. ITV-Virus-Vector Global Theme Asia, Africa, LAC. Collaborative Assessment and Management of Insect Transmitted Viruses in the IPM CRSP. PI: S Tolin (VT); co-PIs: JK Brown, RL Gilbertson (UC-Davis), M. Deom (U-GA). 2004-2009. \$711,096.

USAID IPM CRSP Phase IV. IPVD-Global Theme. Toward Effective Integrated Pest Management of Plant Disease Caused by Viruses in Developing Countries: Detection and Diagnosis, Capacity Building and Training and Formulation of IPM Packages 2009-2014. PI: S Tolin (VT); co-PIs: JK. Brown, RL Gilbertson (UC-Davis), M. Deom (U-GA). 2005-2009.

UA Foundation. Graduate Fellowship, R. Caballero. 2000. \$10,000.

USDA NRI Grant # 2005-35302-16188. Whitefly *Bemisia tabaci* molecular and population analysis of the putative cryptic species complex. PI: J.K. Brown; coPI: G.K. Roderick 2005-2008. \$300,000.

USDA-Foreign Agriculture Service-Scientific Exchange program. 2010. USDA-FAS \$23,933.

USDA Special Cooperative Agreement. Transcriptional analysis of potato psyllid. 2010. \$16,915.

USDA Special Cooperative Agreement. Transcriptional analysis of salivary glands and midguts from *Bemisia tabaci* and effects of begomovirus transmission. 2010. \$12,798.

Transcriptional analysis of citrus psyllid infected with *Liberibacter asiaticus*. 2010-2012. Citrus Res. & Development Foundation Grant #21. Florida \$164,999.

Transcriptome analysis of potato psyllid and effects for temperature on *Liberibacter solanacearum*. 2011-2013. USDA Special Cooperative Agreement (J. Crosslin and JK Brown). \$50,000.

Gross and fine structure of the citrus psyllid anatomy and CLas transmission pathway. 2010-2012. Citrus Research Development Foundation-Florida. Grant #34. \$119, 998.

Citrus psyllid transcriptome and time course differential expression in whole psyllids and psyllid organs. 2010-2013. Citrus Res. & Dev. Found. Florida Grant #21. \$494,997.

Cellular mechanism that drive CLas-Liberibacter interactions. 2010-2013. Citrus Res. & Development Foundation. Florida \$350,000.

Western Regional IPM Center-Arizona Plant Diagnostic Network. 2010- 2014. USDA. \$113,647 (on behalf of AZ-PDN triage labs).

USDA-APHIS. Citrus greening *Liberibacter* diagnostics for state quarantine support. 2010-2014. Arizona Dept. of Agriculture. 2010-2014. \$406,702.

Viral metagenomics analysis of RCA amplified CLCuMV-Burewala and associated satellites for development of a detection system for monitoring. 2010-2014. Cotton Incorporated. \$378,000.

USDA-Foreign Agriculture Service. Borlaug Fellowship Program-Cotton leaf curl virus complex. 2011-2014. \$181,984.

Recovery Plan for *Cotton leaf curl Multan virus*. 2011-2012. USDA/Michigan State University. \$24,465.

Genetic engineering of microalgae and molecular tools for community monitoring. July 1, 2010-June 30, 2013. Co-PI with K. Ogden, UA Biology Lead. US Dept of Energy (award to JKB) \$370,000.

USAID Global Theme/LAC and Africa. International Plant Diagnostic Network for Plant Viruses. 2010-2015. \$293,069.

USDA-Agricultural Research Service international project: Development of *Cotton leaf curl virus* diagnostic tools and monitoring of CLCuV in Pakistan. Pakistan-U.S. Cotton Productivity Enhancement Program. Project No.58-6402-0-178F. 2010-2015. \$513,403.

Borlaug Fellowship-World Cocoa Foundation-Cote d'Ivoire. 2013-2015. USDA. \$104,979.

S Co-PI, UA Biology Team, Lead. DOE Consortium Grant DE-EE0003046. (UA PI Cusanovich) JKB award \$850,000.

US-Department of Energy. Regional algae feedstock testbed (RAFT) partnership. 2014-2018. Co-PI, JK Brown Plant Sciences; PI: K. Ogden, Chem Eng. RAFT Project, funded by grant DE-EE0006269; collaborative with Chem. Engineering (PI Ogden). JKB award \$472,428.

USDA Cooperative Agreement – Pakistan. Development of diagnostic screening tools and transgenic tomato plants with resistance to Cotton leaf curl begomovirus disease complex. 2012-2017. USDA \$218,000.

USDA-ARS Special Cooperative Agreement. Development of diagnostic tools for detection of *Cacao swollen shoot virus*, a re-emergent virus in West Africa. 2013-2015. \$150,000.

NuPsyllid-Rear and release psyllids as biocontrol for HLB. 2013-2017. USDA-NIFA SRCRI. \$1,400,517 (UA: \$720,767 + \$484,035 + \$195,715). Subcontract: Citrus Research and Development Foundation, Inc. 13-005NU-784.

Recovery Plan for *Cowpea mild mottle virus*. 2014-2015. USDA-North Carolina State University \$20,114.

Epigenetics analysis of a *Chlorella vulgaris* low-phosphate selected mutant. 2014-2015. UA-TRIF WEES \$44,660.

Citrus greening *Liberibacter* diagnostics for state quarantine support. 2014-2015. Arizona Dept. of Agriculture. \$340,000.

Western Regional IPM Center-Arizona Plant Diagnostic Network. 2014-2016. For AZ-PDN team, c/o JKB-PI). USDA \$72,919.

Identification of the causal agent of witches broom on blue palo verde. 2015-2017. PI: U.K. Schuch; co-PI: J.K. Brown (50%). Britton Fund \$25,000 & AZ Nursery Association \$5000.

Validation of field and laboratory test platforms for detection of Cotton leaf curl virus complex, a high-risk pathogen to U.S. Cotton. 2015. Cotton Incorporated \$89,843.

Borlaug Fellowship Program-Pakistan. USDA-FAS. Cotton leaf curl virus complex. 2015. \$26,800.

Updated Recovery Plan for Cotton leaf curl viral disease complex. 2015-16. USDA. \$10,000.

Borlaug Fellowship Program-Potato psyllid *Liberibacter* study system: biology, GIS, and modeling. 2015-2017. PI, JK Brown (\$17,100, includes workshop), w/co-PIs: Phil Guertin (Nat. Resources) and Peter Waller (ABE). USDA-FAS Plant Health \$37,234.

Borlaug Fellowships-World Cocoa Foundation/USDA. Cacao swollen shoot virus international training-Nigeria and Cote d'Ivoire. 2015-2017. \$80,251.12

Citrus greening *Liberibacter* diagnostics for state quarantine support. 2016. Arizona Dept. of Agriculture. \$186,250.

Isothermal, qPCR, and next-gen platforms for strain and group-specific detection of Cotton leaf curl Multan virus-betasatellite complex, a high-risk pathogen to US cotton. 2016. Cotton Inc. \$87,400.

Determining Cacao swollen shoot virus diversity and distribution, epidemiology and genomic tools for identification. 2016-2020. USDA-Agricultural Research Service Special Cooperative Agreement. \$175,000.

Development of *in vitro* biofilm and planktonic culture of *Ca. Liberibacter asiaticus*: a game change in HLB research. 2016-2018. Co-PI, JK Brown (PI, D. Gang, WSU). USDA-NIFA \$61,462.

ACP-HLB polymerase chain reaction detection. 2016-2017 (April-March). California Dept of Food & Agric. \$455,674 (100,000 Asian citrus psyllid samples for qPCR detection of *Liberibacter asiaticus*). Western Regional IPM Center-Arizona Plant Diagnostic Network. 2016-2021. For AZ-PDN team, c/o JKB-PI). USDA-NIFA. UC-Davis subcontract. \$148,282.

Investigating the Cause of Witches Broom in Blue Palo Verde, Arizona's Heritage Tree. 2017-2018. PI: U.K. Schuch; co-PI: J.K. Brown (50%). Dept of Forestry and Fire Management. \$15,000.

Isothermal, qPCR, and next-gen platforms for strain and group-specific detection of *Cotton leaf curl Multan virus*-betasatellite complex, a high-risk pathogen to US cotton. 2017. Cotton Inc. \$87,000.

Citrus greening *Liberibacter* diagnostics for state quarantine support. 2017. Arizona Dept. of Agriculture. \$282,810.

ACP-HLB polymerase chain reaction detection. April 2017-March 2018. California Dept of Food & Agric. \$350,000.

Curbing whitefly plant virus pandemics, the departure from pesticides to genomic solutions. 2017-2018. US-India Bilateral Workshops/Symposia/Conferences. \$50,000 (direct award to Punjab Agricultural Univ., India-Collaborating host institution).

Leveraging Multiple Sequencing Projects across Plant Sciences to Foster a Nanopore Sequencing Community at UA. CALS Innovation Venture Investment Program. Oct 2018-Oct 2019. \$87,300 (Joint: PI Baltrus; co-PIs: Brown, Hu, Pryor. [co-PI Brown 15%]).

Community Challenge Grants: Optimizing diagnostics for management of witches broom in blue palo verde project Jan 1, 2018-Dec 30, 2019 (PI: Ursula Schuch (50%); co-PI J.K. Brown (50%)). \$20,000.

Citrus greening *Liberibacter* diagnostics for state quarantine support. 2018-2019 (Jan 1-Dec 31). Arizona Dept. of Agriculture. \$301,187.

ACP-HLB polymerase chain reaction detection. April 2018-March 2019. California Dept of Food & Agric. \$348,766.

Cotton leaf curl Multan virus-betasatellite complexes and other high-risk viral pathogens to US cotton. 2018 (Jan 1-Dec 31). \$97,000*.

Controlling palo verde broom in nurseries. Sept 1, 2018-Aug 31, 2020. PI: U.K. Schuch (50%); co-PI: J.K. Brown (50%). Arizona Specialty Crops, USDA-AMS. \$93,730.

Unrestricted Gift to support research on cacao-infecting viruses. 2017-present. MARS Inc. \$150,000*.

PCR detection and identification/mapping of CSSD badnaviruses. July 1, 2018-July 31, 2019. Wrigley \$50,000.

Cotton leafroll dwarf virus genome sequencing and characterization. 2019 (Jan 1-Dec 31) Cotton Inc. \$30,000.

Fulbright Scholar benchfees. Dr. Kadri Just, Sweden. Begomovirus characterization and infectivity. 2019. \$6,345.

Molecular pathology surveillance of Cotton leaf curl virus complex. 2019 (Jan 1-Dec 31). Cotton Inc. \$107,515.

Citrus greening *Liberibacter* diagnostics for state quarantine support. 2019 (Jan 1-Dec 31). Arizona Dept. of Agriculture. \$300,187.

ACP-HLB polymerase chain reaction detection. April 2019-March 2020. California Dept of Food & Agric. \$386,066.

2020-2022 (Aug 15-Sept 30). Cacao badnavirus molecular diagnostics. USDA-NPDRS. \$98,500. (100%).

2022 (Jan 1-Dec 31). Citrus greening *Liberibacter* diagnostics for state quarantine support. Arizona Dept. of Agriculture. PI: Brown \$164,746. (100%).

ACTIVE Grants 2018-present

Federal Grants Awarded

- 2018-2024** (Jan 15-May 14). Biopesticidal dsRNA therapy for psyllid mortality and abatement of vector-mediated CLas transmission. USDA-NIFA CDRE 2018-70016-27411 (PI: Brown (80%) co-PI: Qureshi (20%)). \$3,777,387.
- 2020-2023** (Jan 1-Dec 31). HLB biology psyllid-Liberibacter transmission in citrus. PI: N. McRoberts, co-PI: M. Rivera/Frank Byrne UC Davis; co-PI: J.K. Brown (100% UA portion). USDA-APHIS Farm Bill. \$464,518.
- 2021-2023** (July 1-June 30). Molecular detection of global Tomato yellow leaf curl virus in plants and seeds. USDA-APHIS PPQ CPHST. \$124,450. (100%).
- 2021-2024** (Sept 1-Aug 31). USDA-Foreign Agriculture Service-Scientific Exchange program. 2022-2025. USDA-FAS \$60,000.
- 2022-2024** (Oct 1-June 30). Development of a multiplex PCR assay for the simultaneous detection of the invasive cotton leaf curl Gezira virus and okra yellow mosaic Mexico virus in plants and whiteflies in Texas. USDA-APHIS PPQ CPHST. PI: Brown. \$45,895. (100%).
- 2022-2024** (Jan 15-Jan 14). NGS-surveillance and phylogenomic analyses of cotton-infecting plant viruses to inform breeding strategies for virus resistance in cotton. USDA-NIFA Cross-Cutting-Cotton. \$300,000. (100%).
- 2021-2025** (Sept 21-Sept 19). Assessing soil and plant health response to composted and solarized grape pomace with manure in semi-arid soil. USDA NIFA-Organic Agriculture. PI: Brown (70%), co-PI Tronstad (30%). \$528,926.
- 2021-2025** (Oct 1-Sept 30). CROPPS. NSF total award \$25M. UA Team: Mosher (PI), Beilstein, Brown \$147,563 (20%), Pauli. <https://cyverse.org/researchers-develop-tools-to-listen-talk-to-plants-with-25M-from-NSF>.
- 2022-2026** (Mar14-Mar 13). Promoting Climate-Smart Agricultural Practices Among Under-served Small-Scale Farmers in Arizona Using Farmer Participatory Research. USDA-NRCS. PI: Brown, co-PI Tronstad. \$923,509.
- 2023** USDA Crop germplasm funded
- 2023** USDA NPDRS funded
- 2023** DOE BRAVE (funding notice, November 2023)
- 2024** NSF-ART (funding notice to primary; start date March 2024)
- 2024** Cotton Incorporated funded 45,000

Other Grants Awarded

State

- 2021-2022**. Bench Fees Pakistan Higher Education Commission. \$21,500 (ISRIP Fellows-7). (100%).
- 2020-2022**. Independent-mobile RNA (iRNA) expression vector against HLB-initiate operation Lab-2-farm. California Citrus Research Board (co-PI) \$75,000. (100%).
- 2020-2023** (May). Bolashak Fellow: Dr. Moldir Turaliyev. July 2022-2023. Ministry of Education & Science of the Republic of Kazakhstan. PI: Brown. \$26,886.
- 2022-2024** (Oct 1-Sept 30). Knowledge based practices for paloverde broom control. AZ Spec Crops. PI: Schuch (50%), co-PI: Brown (50%). \$65,213.

Industry

- 2018-2023** (April 1-June 1). Casualty, phylodynamics, and management of badnaviruses infecting cacao. Wrigley-MARS. \$1,977,369. (100%)
- 2022** (Jan 1-Dec 31). Molecular pathology surveillance of cotton leaf curl virus complex. 2022 Cotton Incorporated. PI: Brown. \$99,129. (100%).

Contracts for Service Provided

- 2020-2026** (Aug 15-Sept 30). Cacao badnavirus molecular diagnostics. USDA-ARS/NPDRS Miami \$198,500. (100%).

UA INSTRUCTION/CLASSROOM TEACHING (5% appointment)

Spring 1999-2002; Fall 2003 Plant-Insect Interactions ENT/PLS496/596A (1 unit) Course Coordinator & Discussion Leader

Spring/Fall 1998-2002 NATS 104-Plants and Our World (3 units); Team-taught with R. Leonard and/or D. Ray (33% lectures; Friday Discussion Section)

Fall 2001-2003 PLP/MIC 329 Microbial Diversity (1 unit) (1 lecture)

Fall 2003 Lecturer *PLS 660* (4 units), Team-taught (3 lectures)

Fall 2004: *PLS560* Core Concepts in Plant Biology (4 units); Course Coordinator and Lecturer (4 lectures); PLP/MIC 329 Microbial Diversity (1 unit); Coordinator and Lecturer (3 lectures)

Plant Virology PP 611 (3 units) (3 lectures)

BIOL 181 Honors Section (1 lecture)

PLS Senior Capstone (1 lecture)

Fall 2005 Coordinator and Lecturer *PLS560 Core Concepts in Plant Biology* (4 units) (6 lectures)

BIOL 181 Honors (1 lecture)

PLS Senior Capstone. (1 lecture)

Fall 2006 NATS 104 Section (39 enrollment) (50% Team-Taught w/ D. Ray)

Fall 2007 Microbiology 610 Advanced Topics in Microbiology and Cell Biology (3 lectures)

Fall 2008 Microbiology 610 Advanced Topics in Microbiology and Cell Biology (2 lectures)

Fall 2008 Biology 181 Mentor –10 Honors students, Archaeobacteria viruses

Spring 2009 Biology 181 Mentor –10 Honors students, Archaeobacteria viruses

Spring 2010 Microbiology 205 (3 units) – Six lectures Immunology and Epidemiology

Fall 2010 Virology 333 (3 units, 27 students)

Spring 2012 Virology 333 (3 units, 23 students)

Spring 2011and 2012 Microbiology 195a (1 unit, 18 students)

Fall 2013 PLS596B Journal Club (1 unit, 6 graduate students): Mechanisms of vector-pathogen interactions

Spring 2014 PLS/MIC 233 Virology (3 units, 25 students)

Fall 2014 PLS596B Journal Club (1 unit, 4 students): Tripartite pathogen-host-arthropod interactions

Spring 2015 PLS 424-524 Plant Biotechnology (E. Herman): Cross protection & gene silencing-plant viruses (guest lecture March 5)

Fall 2015 PLS 596B Journal Club (1 unit, 4 graduate students): Current Topics in plant biotechnology-scheduled (Co-instructor w/ M. Schmidt)

Spring 2016 PLS 424-524 Plant Biotechnology (E. Herman): Cross protection & gene silencing-plant viruses; RNAi insect vector management (2-guest lectures, 12 students)

Spring 2016 PLS/MIC 333 Virology (3 units, 27 students)

Fall 2016 PLS596B Journal Club (1 unit, 5 graduate students)

Spring 2017 PLS 424-524 Plant Biotechnology (E. Herman): Cross protection & gene silencing-plant viruses; RNAi insect vector management (3-guest lectures, 6 students)

Spring 2018 PLS/MIC 333 Virology (3 units, 28 students)

Fall 2018 MIC/PLS 611 Comparative Virology (3 units, 5 students)

Spring 2019 PLS 424-524 Plant Biotechnology (E. Herman): Cross protection & gene silencing-plant viruses; RNAi insect vector management (3-guest lectures, 10 students)

Spring 2020 PLS/MIC 333 Virology (23 students)

Spring 2022 PLS/MIC 333 Virology

Spring 2022 PLS/MIC 333 Virology (27 students)

Fall 2022 PLS/PLP 596A Seminar w/ D. Pauli (14)

Fall 2022 PLS595B CROPPs seminar w/ B. Mosher (3)

Spring 2023 PLS/PLP 596A Seminar w/ D. Pauli (17)

SCIENTIFIC PUBLICATIONS (80% Research appointment) [Books-1; Textbook chapter-1; Book chapters-13; Review articles-13; Referred journal articles-253; Short Reports/Disease Notes-61]

Books (Total 1)

Vector-Plant Pathogen Interactions. 2016. Brown, J.K. (Ed.) American Phytopathological Society Press, St Paul MN. 496 pp.

Text Book Chapter (Total 1)

Langham, M., and Brown, J.K. 2016. Plant Pathogenic Viruses. Chapter 14 in: *Plant Pathology: Concepts and Laboratory Exercises, Third Edition*, Editors: Trigiano and Ownley. Taylor & Francis Group, LLC. 576 pp.

Book Chapters (Total 16)

- Brown, J.K. 1996. Chapter 5: *Molecular biology and epidemiology of Subgroup III*, Geminiviridae. Pages **125-195** In: Plant-Microbe Interactions Review Series, G. Stacey and N. Keen, (eds.) Chapman and Hall.
- Brown, J.K. 2001. *The Molecular epidemiology of begomoviruses*. Pages **279-316** in: Trends in Plant Virology (J. A. Khan and J. Dykstra), The Haworth Press, Inc., NY. 537pp.
- Brown, J.K. and Czosnek, H. 2002. Whitefly transmission of plant viruses. *Advances in Botanical Research* **36**: 65-100. Academic Press-Elsevier.
- Brown, J.K. 2004. *Tracing the Origins of Insect Pests, Vectors, and Natural Enemies*. Pages **113-136** In: Ehlers L, Storza R, Mateille T, editors. Genetics, Evolution and Biological Control. CAB International. 260pp.
- Brown, J.K. 2007. The *Bemisia tabaci* complex: Genetic and phenotypic variation and relevance to TYLCV-vector interactions. Pages **25-55** in: *Tomato yellow leaf curl virus disease*. H. Czosnek (ed.). Springer, New York and Tokyo. 447 pp.
- Brown, J.K. 2008. *Plant Resistance to Viruses: Geminiviruses*. Pages **164-170** in: Encyclopedia of Virology, 5 vols. (B.W.J. Mahy and M.H.V. Van Regenmortel, Editors), Oxford: Elsevier.
- Brown, J.K. 2010. *Bemisia*: Phylogenetic biology of the *Bemisia tabaci* sibling species group. Pages **31-67** in: *Bemisia: Bionomics and Management of a Global Pest*. Stansly, P.A. and S. E. Naranjo (eds.), Springer, Netherlands, 350pp.
- Czosnek, H., and Brown, J.K. 2010. *The Whitefly Genome White Paper*. Pages **503-532** in: *Bemisia, Bionomics and Management of A Global Pest*. Bionomics and Management of a Global Pest. Stansly, P.A. and S. E. Naranjo (eds.), Springer, Netherlands. 350pp.
- Gill, R. and Brown, J.K. 2010. Systematics of *Bemisia* and *Bemisia* relatives: Can molecular techniques solve the *Bemisia tabaci* complex conundrum--a Taxonomist's viewpoint. Pages **5-29** in: *Bemisia: Bionomics and Management of a Global Pest*. Stansly, P.A. and S. E. Naranjo (eds.), Springer, Netherlands. 350pp.
- Hadjistylli, M., Brown, J.K., and Roderick, G.K. 2010. Tools and recent progress in studying gene flow and population genetics of the *Bemisia tabaci* sibling species group. Pages **69-103** in: *Bemisia: Bionomics and Management of a Global Pest*. Stansly, P.A. and S. E. Naranjo (eds.), Springer, Netherlands. 350pp.
- Brown, J. K., Fauquet, C. M., Briddon, R. W., Zerbini, M., Moriones, E., and Navas-Castillo, J. 2012. *Geminiviridae*. Pages **351-373** in: Virus taxonomy: classification and nomenclature of viruses: Ninth Report of the International Committee on Taxonomy of Viruses. Ed: King, A.M.Q., Lefkowitz, E.J., Adams, M.J., and Carstens, E.B. San Diego [Elsevier Academic Press](#), 1344 pp.
- Brown, J.K., Cicero, J.M., and Fisher, T.J. 2016. Psyllid-transmitted *Candidatus Liberibacter* species infecting citrus and solanaceous hosts. Pages **399-422** in: *Vector-Mediated Transmission of Plant Pathogens*, (ed.) Brown, J.K. American Phytopathological Society Press, St. Paul, MN. 496 pp.
- Cicero, J.M., and Brown, J.K. 2016. *Bemisia tabaci*-mediated transmission of begomoviruses: History and anatomical, biological, and cellular interactions. Pages **211-230** in: *Vector-Mediated Transmission of Plant Pathogens*, (ed.). Brown, J.K. American Phytopathological Society Press, St. Paul, MN. 496 pp.
- Brown, J.K., and Khan, Z. 2022. Breeding cotton for cotton leaf curl disease resistance Chapter 11. Pages **171-198** in: *Cotton Breeding and Biotechnology Challenges and Opportunities*. CRC Press. 368 pp.

- Parker, T.A., Gallego, J.A., Beaver, J., Brick, M., Brown, J.K., Cichy, K., Debouck, D.G., Delgado-Salinas, A., Dohle, S., Ernest, E., Estevez de Jensen, C., Gomez, F., Hellier, B., Kerasev, A., Kelly, J.D., McClean, P., Miklas, R., Myers, J.R., Osorno, J.M., Pasche, J.S., Pastor-Corrales, M.A., Porch, T., Steadman, J.R., Urrea C., Wallace, L., Christine H. Diepenbrock, C.H., and Gepts, P. **2023**. Genetic resources and breeding priorities in Phaseolus beans: Vulnerability, resilience, and future challenges. **Pages 289-420** in: Plant Breeding Reviews, Volume 46, First Edition. Edited by Irwin Goldman. John Wiley & Sons, Inc.
- Sain, S.K., J.K. Brown, and D. Monga. **2023**. Global status of cotton leaf curl disease – An ongoing threat to cotton production. Chapter 9, Pages 92-134 in: Cotton: Some Insights). D. Pathak D, S. Singh, H. Kumar, G Grover, and N. Kaur (Eds). The Crop Improvement Society of India, Ludhiana, India. 184 pp. <https://doi.org/10.5281/zenodo.8298304>.

Invited Reviews or Features (Total 15)

- Brown, J.K. 1990. An update on the whitefly-transmitted geminiviruses in the Americas and the Caribbean Basin. *FAO Plant Prot. Bull.* **39**:5-23.
- Brown, J.K. and Bird, J. 1992. Whitefly-transmitted geminiviruses in the Americas and the Caribbean Basin: past and present. *Plant Dis.* **76**:220-225.
- Brown, J.K. 1992. Virus diseases of cotton. **Pages 275-330** in: Cotton Diseases. R. J. Hillocks, ed. Commonwealth Agricultural Bureaux International, Oxon, United Kingdom. 415 pp.
- Brown, J.K. 1994. The status of *Bemisia tabaci* (Genn.) as a pest and vector in world agroecosystems. *FAO Plant Prot. Bull.* **42**: 3-32.
- Brown, J. K., Frohlich, D., and Rosell, R.C. 1995. The sweet potato/silverleaf whiteflies: biotypes of *Bemisia tabaci* (Genn.), or a species complex? *Ann. Rev. Entomology* **40**: 511-534.
- Brown, J.K. 2000. Molecular markers for the identification and global tracking of whitefly vector-begomovirus complexes. *Virus Research* **71**:233-260.
- Brown, J.K. 2007. The *Bemisia tabaci* complex: genetic and phenotypic variability drives begomovirus spread and virus diversification. Online APSnet Feature. <https://www.apsnet.org/edcenter/apsnetfeatures/Pages/BemisiatabaciComplex.aspx>
- Crosslin, J.M., Munyaneza, J.E., Brown, J.K., and Liefting, L.W. 2010. Potato “zebra chip” disease: a phytopathological tale. *Plant Health Progress*. <http://www.plantmanagementnetwork.org/php/elements/sum.aspx?id=8676&photo=4859>
- Crosslin, J.M., Munyaneza, J.E., Brown, J.K., and Liefting, L.W. 2010. A history in the making: potato zebra chip disease associated with a new psyllid-borne bacterium – a tale of striped potatoes. APSNet January Feature: <http://www.apsnet.org/online/feature/zebra/>.
- Espinoza-R., H.R., Rivera-C., J.M., Brown, J.K., and Weller, S. 2014. Manejo integrado De plagas de papa en Honduras. Serie Protección Vegetal Conociendo y combatiendo los enemigos de los cultivos Fundación Hondureña De Investigación Agrícola, La Lima, Cortés, Honduras, C.A./USAID.
- Leke, W., Mignouna, D.B., Brown, J.K., and Kvarnheden, A. 2015. Begomovirus disease complex: Emerging virus diseases treat in vegetable production systems of West and Central Africa -A review. *Agric. & Food Security* 4:1. <http://dx.doi.org/10.1186/s40066-014-0020-2>.
- Lammers, P., Huesemann, M., Boeing, W., Anderson, D.B., Arnold, R.G., Bai, X., Bohle, M., Brown, L., Brown, J.K., Downes, M.C., Ge, Y., Holladay, J.E., Khopkar, A., Laur, P., Marrone, B.L., Mott, J.B., Nirmalakhandan, K., Ogden, K., Parsons, R., Polle, J., Ryan, R.D., Sayre, R.T., Seger, M., Selvaratnam, T., Thomasson, A., and Olivares, J.A. 2016. Review of the cultivation program within the national alliance for advanced biofuels and bioproducts. *Algal Res.* doi 10.1016/j.algal.2016.11.021.
- Marelli, J.-P., Guest, D.I., Bailey, B.A., Evans, H.C., Brown, J.K. Juanid, M., Barreto, R.W., Lisboa, D.O., and Puig, A.S. 2019. Chocolate under threat from old and new cacao diseases. *Phytopathology* 109:1331-1343 <https://apsjournals.apsnet.org/doi/10.1094/PHYTO-12-18-0477-RVW>.
- Brown J K, 2020. Cotton leaf curl disease complex (leaf curl disease of cotton). *Invasive Species Compendium*. Wallingford, UK: CABI. DOI:10.1079/ISC.16813.20210200739.

Brown, J.K. 2020. Cotton leaf curl Gezira virus. Invasive Species Compendium. Wallingford, UK: CABI. DOI:10.1079/ISC.13816.20210200731.

Refereed Journal Articles (Total 190)

1984

- Brown, J.K., Wyatt, S.D., and Hazelwood, D. 1984. Irrigated corn as a source of barley yellow dwarf virus and vector in eastern Washington. *Phytopathology* **74**:46-49.
- Brown, J.K. and Nelson, M.R. 1984. Geminata particles associated with cotton leaf crumple disease in Arizona. *Phytopathology* **74**:987-990.

1986

- Brown, J.K. and Nelson, M.R. 1986. Whitefly-borne viruses of melons and lettuce in Arizona. *Phytopathology* **76**:236-239.
- Rosemeyer, M.E., Brown, J.K., and Nelson, M.R. 1986. Five viruses isolated from field-grown buffalo gourd, *Cucurbita foetidissima* HBK, a potential crop for semi-arid lands. *Plant Dis.* **70**:405-409.
- Butler, G.D., Jr., Brown, J.K., and Henneberry, T.J. 1986. Effect of cotton seedling infection by cotton leaf crumple virus on subsequent growth and yield. *J. Econ. Entomol.* **79**: 208-211.
- Brown, J.K., Mihail, J.D., and Nelson, M.R. 1987. The effects of cotton leaf crumple virus on cotton inoculated at different growth stages. *Plant Dis.* **71**:699-703.

1987

- Brown, J.K. and Nelson, M.R. 1987. Host range and vector relationships of cotton leaf crumple virus. *Plant Dis.* **71**:522-524.

1988

- Brown, J.K. and Nelson, M.R. 1988. Transmission, host range, and virus-vector relationships of chilo del tomate virus (CdTV), a whitefly-transmitted geminivirus from Sinaloa. *Plant Dis.* **72**:866-869.
- Fairbanks, D.J., Smith, S.E., and Brown, J.K. 1988. Inheritance of large mitochondrial RNA's in alfalfa. *Theor. Appl. Genet.* **76**: 619-622.

1989

- Brown, J.K. and Nelson, M.R. 1989. Characterization of watermelon curly mottle virus, a geminivirus distinct from squash leaf curl virus. *Ann. Appl. Biol.* **115**:243-252.
- Brown, J.K. and Poulos, B.T. 1989. Detection of lettuce infectious yellows virus (LIYV) in greenhouse and field-inoculated plants using an indirect enzyme-linked immunosorbent assay. *J. Rio Grande Valley Horticultural Society* **42**:13-18.

1990

- Wilson, F.D., Brown, J.K., and Butler, G.D., Jr. 1990. Reaction of cotton cultivars and lines to cotton leaf crumple virus. *J. of the Az.-Nev. Acad. Sci.* **23**:7-10.

1991

- Wilson, F.D., and Brown, J.K. 1991. Inheritance of resistance to cotton leaf crumple virus in cotton. *J. of Heredity* **82**:508-509.
- Costa, H.S., Brown, J.K., and Byrne, D.N. 1991. Host plant selection by the whitefly, *Bemisia tabaci* (Genn.) (Homoptera: Aleyrodidae) under greenhouse conditions. *J. Appl. Entomol.* **112**:146-152.
- Costa, H.S., Brown, J.K., and Byrne, D.N. 1991. Life history traits of the whitefly *Bemisia tabaci* (Genn.) (Homoptera: Aleyrodidae) on six virus-infected or healthy plant species. *Environ. Entomol.* **20**: 1102-1107.
- Costa, H.S., and Brown, J.K. 1991. Variation in biological characteristics and in esterase patterns among populations of *Bemisia tabaci* (Genn.) and the association of one population with silverleaf symptom induction. *Entomol. Exp. Appl.* **61**:211-219.

1992

- Borad, V.K., Puri, S.N., Brown, J.K., and Butler, G.D., Jr. 1992. Seasonal monitoring of sweetpotato whitefly, *Bemisia tabaci* and the relationship to incidence of leaf curl disease in tomato. *J. Appl. Zool. Res.* **3**:124-127.

- Swanson, M.M., Brown, J.K., Poulos, B.T., and Harrison, B.D. 1992. Genome affinities and epitope profiles of whitefly-transmitted geminiviruses from the Americas. *Ann. appl. Biol.* **121**:285-296.
- 1993**
- Brown, J.K., Fletcher, D., and Bird, J. 1993. First report of Passiflora leaf mottle caused by a whitefly-transmitted geminivirus in Puerto Rico. *Plant Dis.* **77**:1264.
- Brown, J.K., Idris, A.M., and Fletcher, D. 1993. Sinaloa tomato leaf curl virus, a new geminivirus of tomato and pepper in northwestern Mexico. *Plant Disease* **77**:1264.
- Costa, H.S., Brown, J.K., Sivasupramaniam, S., and Bird, J. 1993. Regional distribution, insecticide resistance, and reciprocal crosses between the 'A' and 'B' biotypes of *Bemisia tabaci*. *Insect Sci. Applic.* **14**:127-138.
- Kirk, A.A., Lacey, L.A., Roditakis, N., and Brown, J.K. 1993. The status of *Bemisia tabaci* (Hom: Aleyrodidae), *Trialeurodes vaporariorum* (Hom: Aleyrodidae) and their natural enemies in Crete. *Entomophaga* **38**: 405-410.
- 1994**
- Bedford, I.D., Briddon, R.W., Brown, J.K., Rosell, R.C., and Markham, P.G. 1994. Geminivirus transmission and biological characterization of *Bemisia tabaci* (Gennadius) biotypes from different geographic regions. *Ann. Appl. Biol.* **125**:311-325.
- Coats, S.A., Brown, J.K., and Hendrix, D.L. 1994. Biochemical characterization of biotype-specific esterases in the whitefly *Bemisia tabaci* Genn. (Homoptera: Aleyrodidae). *Insect Biochem. Mol. Biol.* **24**: 723-728.
- McGrath, M.T., Gilrein, D., and Brown, J.K. 1994. First report of squash silverleaf disorder and the 'B' biotype whitefly in New York. *Plant Dis.* **78**: 641.
- Neal, Jr., J.W., Leonhardt, B.A., Brown, J.K., Bentz, J., Devilbiss, E.D. 1994. Cuticular lipid composition of *Trialeurodes vaporariorum* (West) and *Bemisia tabaci* (Genn.) biotypes A and B (Homoptera: Aleyrodidae) and the effect of different host plant species. *Ann. Entomol. Soc. Am.* **87**: 609-618.
- 1995**
- Anthony, N., Brown, J.K., Markham, P.G., and Ffrench-Constant, R.H. 1995. Molecular analysis of cyclodiene resistance-associated mutations among populations of the sweetpotato whitefly *Bemisia tabaci*. *Pestic. Biochem. & Physiol.* **51**: 220-228.
- Brown, J.K., Coats, S., Bedford, I.D., Markham, P.G., Bird, J., and Frohlich, D.R. 1995. Characterization and distribution of esterase electromorphs in the whitefly, *Bemisia tabaci* (Genn.) (Homoptera: Aleyrodidae). *Biochem. Genet.* **33**: 205-214.
- Costa, H.S., Wescot, D.M., Ullman, D.E., Rosell, R., J.K Brown, and Johnson, M.W. 1995. Morphological variation in *Bemisa* endosymbionts. *Protoplasma* **189**: 194-202.
- Rosell, R., Lichty, J.E., and Brown, J.K. 1995. Ultrastructure of the mouthparts of adult sweetpotato whitefly, *Bemisia tabaci* (Gennadius) (Homoptera: Aleyrodidae). *Int. J. of Insect Morphol. & Embryol.* **24**: 297-306.
- Thomas, J.C., Adams, D.G., Keppenne, V.D., Wasmann, C.C., Brown, J.K., Kanost, M.R., and Bohnert, H.J. 1995. *Manduca sexta* encoded protease inhibitors expressed in *Nicotiana tabacum* provide protection against insects. *Pl. Physiol. & Biochem.* **33**: 611-614.
- Thomas, J.C., Adams, D.G., Keppenne, V.D., Wasmann, C.C., Brown, J.K., Kanost, M.R., and Bohnert, H.J. 1995. Protease inhibitors of *Manduca sexta* expressed in transgenic cotton. *Plant Cell Rep.* **14**: 758-762.
- Thomas, J.C., Adams, D.G., Nessler, C.L., Brown, J.K., and Bohnert, H.J. 1995. Tryptophan decarboxylase, tryptamine, and reproduction of the whitefly. *Plant Physiol* **109**: 717-720.
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- Keith C V, Iqbal M J, Brown JK. 2023. Automated plant virus community pipeline for high-throughput viral genome assembly to facilitate pathogen surveillance in cotton-vegetable agroecosystems (oral presentation). *Cotton Beltwide Annual Meeting. Jan 10-12, 2023. New Orleans, LA*.

Outreach/Service Bulletins or Compendia (Total 6)

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Media (Total 17)

WebCast-American Phytopathological Society, Plant Management Network, Crop Protection and Management Collection: Focus on Cotton. [Begomovirus-Whitefly Vector Complexes: Emerging Threats to Cotton-Vegetable Crop Biosecurity](#). Published on line, November 18, 2014.

Threat of *Cowpea mild mottle virus* —what we know and don't know about this exotic virus. May 19, 2015. American Phytopathological Society *Scientific Presentations*.

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News articles

Combating CYSDV in Arizona. In S. McGinley [ed.], Science and Education 2009 Impacts, A College of Agriculture and Life Sciences Report to CSREES, The University of Arizona, Tucson, AZ. URL: cals.arizona.edu/impacts/1_5.html.

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UA news features: Cacao swollen shoot virus disease of the chocolate tree. 2018.

<https://phys.org/news/2018-02-ravaged-poorly-disease-cacao-trees.html>

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Interviews

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SERVICE

Intramural

Departmental Committees: Plant Sciences

1997-1998	Peer Review Committee
1999-2000	Interdisciplinary Plant Biology Seminar Committee
1998-2004	PLS Graduate Student Committee
1998-2002	PLS-ENT NSF Plant Insect Interactions Training Grant, Executive Committee
	Interdisciplinary Research in Plant Biology /Training Grant from NSF
1999-2004	Chair, PLS Graduate Program Committee. Recruitment for PLS graduate program. Revised MS and Ph.D. programs (MS adopted, 2001). Completed special projects: revised graduate student rotations, updated PLS graduate program website, revised Graduate Handbook electronic format, forms on-line, first links with UA Graduate School website
1999-2002	Advisory Committee to Plant Science Head (elected)
1999-2008	Growth Chamber Committee.
2001-2002	Peer Review Committee
2004-2006	Peer Review Committee; written evaluation summaries for assigned packets
2005-06	Search and Screen Committee, Plant Sciences Department Head
2005-2007	Peer Review Committee, Chair
2004-2010	Academic Personnel Policies and Tenure/Continuing and P&T Committee
2010	Search and Screen Committee, Plant Sciences Department Head
2012-13	School of Plant Sciences Academic Program Review Committee
2012-13	External member PT&C Committee, Agriculture and Biosystems Engineering
2012-2015	Faculty Consultative Group2- <i>Ad-Hoc</i> ; Advisory to CALS Dean
2012-2016	Academic Personnel Policies and Tenure/Continuing, Chair 2012-2014
2015-2018	Research Strategic Planning Committee
2016-2018	SPLS Seminar Committee
2017-2021	Inclusive Excellence (Diversity) Committee; Chair 2020-2021
2018	Search Committee-School Director
2018-2020	Graduate Student Program Committee
2019-present	Faculty Search Committee-Digital Agriculture
2019-2023	Academic Personnel Policies and Tenure/Continuing-P&T Committee
2020-2021	SPLS Seminar Committee
2021-present	SPLS Curriculum Committee
2021-2022	Faculty Search-Plant Microbe Interactions
2022-2023	SPLS Seminar Committee and Course; Co-chair with D. Pauli

College Committees

1999-2000	Selection Committee, Annual Year-to-Year Appointed Personnel Award for Excellence
1999-2001	Scholarship-Redefined Team
2000	Search and Screen Committee, new Faculty, Plant Pathology Department
2001-2003	State-Wide Pest Management Advisory Group
2002-2007	Millennium Oversight Committee (CALS MOC). Chair, Subcommittee B
2002-present	Arizona Crop Improvement Association Pure Seed Advisory (Dean, Appointed)
2001-2004	College Post Tenure Review Audit Committee
2004-2006	Translational Biology Group
2004-2007	Arizona Alternate Coordinator, National Plant Diagnostics Network
2004-2006	Sonoran Plant and Animal Diagnostics and Research Working Group

2004-2012	Liaison to the College-Arizona Department of Agriculture/Emergency Task Force
2005-2007	College Promotion and Tenure Committee
2008-2020	Arizona Coordinator, National Plant Diagnostics Network
2008-2010	Representative to Arizona State CAPS Committee
2012	Deans' Research Advisory Committee (DRAC); Guidelines team (w/Phil Guertin)
2019-2022	SPLS, Promotion and Tenure Committee, Academic Programs
2022-present	Search, SPLS Director

University Committees

1994	Vice President for Research-Small Grants Program, Reviewer and Chair
2000	Reviewer-Graduate College Dean's Dissertation Fellowship Competition
2001-2013	UAGC Advisory Committee (Core Biotechnology Facility)
2003	External Reviewer; Interdisciplinary Grad Program in Physiology (IDP)
2004-2008	Executive Committee, Insect Sciences Interdisciplinary Program (IDP) (Elected)
2004	External Expert, Committee on Academic Freedom and Tenure (CAFT) hearing
2005-2008	CAFT (elected by faculty); Subcommittee to Define Academic Freedom; Panel member: 8 hearings; Panel Chair 3 hearings; Pre-hearing 1
2009-2010	CAFT, Vice Chair; Panel Chair 1 hearing
2010-2011	CAFT Chair; chaired 3 hearings
2011-2012	University Promotion and Tenure Committee
2011-present	UA Institutional Biosafety Committee
2016-2018	Global Advisory Board, Center for English as a Second Language

Other Service Activities

1995-present	Faculty, Undergraduate Microbiology Program and Committee (2000-2005). Participate in undergraduate microbiology program activities and mentor undergraduate students.
1997-present	Faculty, Center for Insect Sciences (CIS) Faculty. Participant in activities, attend seminars, invite and host speakers, participate in grant proposals relevant to the center's activities, presented seminar.
1997-2008	Interdisciplinary Program (IDP) in Insect Science Advisory Committee (Elected). Participate in activities involving insect sciences, attend seminars, and contribute to grant proposals for graduate student support; student mentoring and rotations. Insect Sciences IDP Advisory Committee 2004-2007).
1997-present	Faculty Mentor, Honors Center. Advise honors undergraduate students and oversee projects; attend speaker functions.
2009-2011	UA-ASSURANCE Mentor, undergraduate students (4 students)

Extramural-Professional Society Activities Regional & National

1990	Convener, Virology Session, APS Pacific Division Annual Meeting. August 1990, Hilo, Hawaii
1991	Organizer and Co-Chair (w/ Bird, J.) for Discussion Session-Whitefly-associated disorders, APS Meeting August, 1991, St. Louis, Missouri.
1992-1997	Co-Chair of Fundamental Research Section - National Five-Year Research Plan on Silverleaf Whitefly
1992-1997	Working Group Committee for National Five Year Plan 1992-1997
1994-1995	Secretary, Whitefly Regional Coordinating Committee
1995-1997	Vice-Chair, WCC-87
1995-1997	USDA Management of Sweetpotato Whitefly and Related Problems Planning and Program Committee National Five Year Plan on Management of Sweetpotato Whitefly and Related Problems 1995-1997
1994	Convener, Virology Session APS-Meeting August 6-11, 1994, Albuquerque, NM.

1994 Discussion Leader-Virology Session, International Whitefly Meeting US/BARD Tel Aviv, Israel October 1994

1995 Organizer, International Meeting on Molecular Epidemiology of Whitefly-Transmitted Geminiviruses: Virus-Vector-Host Interactions, Tucson, AZ June 3-8, 1995 (120 US & International attendees). Sponsor: USDA-Foreign Agriculture Service/Office of International Cooperative Development

1995-present Advisor to APS-Council Liaison, American Type Culture Collection Committee (Geminiviridae), APS-Virology Committee.

1996 Convener, Virology Paper Session, APS-Annual Meeting, August 1996, Pittsburgh, Pennsylvania.

1996-1997 Executive Committee Advisor, National Five Year Plan on Management of Sweetpotato Whitefly and Related Problems, Representative, Agriculture Experiment Station

1996-1997 Chair, Virus Group/Proposal to Renew Status of WCC-87

1997-2001 Chair, WCC-87

1997 Convener, Viral Pathogenesis Paper Session, American Society of Virology, Annual Meeting, July 1997, Bozeman, Montana.

1998 Convener, Virology Paper Session, APS-Annual Meeting, November 1998, Reno, Nevada

1998 Judge, Pacific Division Graduate Student Paper Competition, APS meeting November 1998, Reno, Nevada

2000 Co-Organizer of Symposium sponsored by APS-Virology Committee: Genomics Technologies and Applications for Plant/Plant Pathogen Interactions, APS-Meeting, New Orleans, LA, August 11-17, 2000

2001 Convener, Virology Paper Session, APS-Annual Meeting; Salt Lake City, Utah, August 25-29, 2001

2001-2002 APS Virology *Ad Hoc* Committee to compile virus list for emerging and high risk plant viral pathogens; Compile list of viruses for Virus Genome White Paper.

2002 Co-Chair and Plenary Presentation; USDA Tenth Annual Whitefly Action Plan Workshop, Sunset Meeting

2003 Convener, Virology Paper Session, APS-Society Annual Meeting, Milwaukee, WI. July 27-31, 2003

2003-2003 Program Committee, APS-Caribbean Division Meeting, joint with Southern Division-APS, Mexican Society for Plant Pathology, and Latin American Phytopathological Society, South Padre Island, Texas, April 6-10, 2003

2002-2005 National Program Committee and APS-Virology representative for Congress of the International Union of Microbiologists Society (IUMS), San Francisco, CA, 2005.

2002-2003 *Ad Hoc* Committee Member to draft constitution for APS-Caribbean Division/ approval by APS Council

2003 Organizer and Co-Chair (Virology Committee) 'Symposium on Recent Advances in the Geminiviridae', APS Annual Meeting, Charlotte, SC, July 2003

2001-2006 Elected APS Councilor-Caribbean Division. Annual and mid-year meeting attendance, St. Paul MN. Website development, drafted new constitution, updated membership list; established electronic listserv and e-voting.

2003 APS-Virology Committee-Secretary

2004 APS-Virology Committee, Vice Chair

2004 Organizer, APS symposium, Virology Committee: 'Pathogen-Vector Interactions'

2005 NBACC Threat Assessment Phytopathology Working Group

2005 APS-Virology Committee, Chair.

2005 Organizing Committee, IUMS meeting; Convener, Virology Paper Session, IUMS, San Francisco, CA July 22-27, 2005

2006	Organizing Committee and Session Convener/Moderator, XLVI APS-Caribbean Division Meeting, Cartagena, Colombia, September 12-16, 2006
	CSREES Legume Virus PIPE Committee; <i>Virus Methods</i> Subcommittee (2006-2010).
2008-present	National Plant Disease Network, Coordinator for Arizona
2009	Caribbean Division Meeting, Moderator, Plant Virus Disease, Joint w/ Florida Pathological Society ^[1] May 16-19, 2009, Orlando, Florida
2009	Symposium Organizer and Moderator, Virus-Vector Interactions, Virology Committee, American Phytopathology Society, August 1-5, 2009, Portland Oregon
2009	Symposium Organizer and Moderator, Interactions, Office of International Program Committee, American Phytopathology Society, August 1-5, 2009, Portland, Oregon.
2010	Petition to APS Council to create the new Subject Matter Committee: Pathogen-Vector Interactions. Founding Chair 2011-2012
2010	Organizing Committee National Plant Diagnostics Network National Meeting, San Francisco, CA. Nov 6-8, 2011
2010-2011	Scientific Program, Organizing Committee, American Phytopathological Society-Caribbean Division Annual Meeting, joint with Southeastern Entomol. Society, San Juan Puerto Rico. March 19-23, 2011
2011	Organizer, Symposium ‘Honoring the legacy and lifetime contributions of Julio Bird’, APS-CD meeting, San Juan, PR, March 20-23, 2011
2011	Symposium Co-Organizer and Moderator with C. E. Jensen. New generation diagnostics for pathogens and their management. American Phytopathological Society-Caribbean Division Annual Meeting, joint with Southeastern Entomol. Society, San Juan Puerto Rico. March 19-23, 2011
2011	Organizing Committee, National Plant Diagnostic Network National Meeting, Berkeley, CA November 6-8, 2011
2012	Organizer, Virology Committee Symposium ‘Genomics and proteomics approaches for dissecting virus-vector transmission pathways. APS meeting, Rhode Island Aug 2012.
2012-2013	President APS-CD; Vice President APS-PD; Organizer, Joint APS-CD/APS-PD meeting, Tucson, Arizona, June 13-16, 2013
2013	Organizer, Virology Committee Symposium, Factors influencing dispersal of plant viruses. APS meeting, Austin, TX Aug 2013
2013-2014	President, APS, Pacific Division (Past-President, APS-Caribbean Div)
2013-present	Chair, APS Intersociety Relations Committee
2013-2015	WPDN Representative, National Plant Diagnostics Network Committee
2014-2015	Co-Organizer, Symposium, <i>Seed transmission of vector borne pathogens</i> . American Phytopathological Society Annual Meeting, Pasadena, CA Aug 1-6, 2015.
2014-2016	National Plant Diagnostics Network, National Meeting Planning Committee, Washington D.C. Mar 8-12, 2016.
2015-2016	Co-Organizer, Symposium: <i>Animal and Plant Vector Biology: Addressing Old Questions with New Technologies</i> . Pacific Branch, Entomological Society of America (Honolulu, Hawaii April 2-7, 2016.
2016	Moderator, Liberibacter Symposium, APS Annual meeting, Tampa, FL July 28-Aug 4
2016	HLB Data Analytic Tactical Operations Cell (DATOC) winter 2016-present
2017	Session Convenor, International Citrus Research Symposium, Orlando, FL March 13-17
2017	Local Organizer, UA Host for National Cotton Breeders Tour, Cotton Inc., Dr. Don Jones, UA Campus, September 26, 2017.
2017-present	DATOC-Multi-state committee addressing dynamics and strategic management of HLB spread/psyllid vector dispersal of this quarantine-level disease of citrus.
2018-2019	National Plant Diagnostic Network Tri-annual Meeting Program Committee, Indianapolis, IN, April 15-18, 2019.
2018-2019	National Plant Diagnostic Network Laboratory Accreditation Review Sub-Committee

- 2019 Program Review Committee, California Citrus IPM Program (May-October 2019) with George Kennedy, Don Henne
- 2019-2020 Organizing Committee, Chair WPDN Annual Meeting March 2020, Tucson AZ (host)
- 2020-2022 Vice President and President APS-CD; organized annual meeting joint with Southern Branch-ESA, San Juan Puerto Rico March 27-30, 2022.
- 2022 Symposium organizer, Opportunities offered by piRNA mediated gene silencing in pest control. Joint ESA-Canadian Entomological Society meeting, Vancouver Canada Nov 13-16, 2022.
- 2022 Symposium organizer, APS national meeting, Pittsburg PA. Vectors of Change: How Climate Change is Affecting the Biology of Vectors and Their Transmission of Pathogens at Plant Health August 6-10, 2022. Pittsburg, PA.

Extramural Professional Society Activities - International

- 2003 Convener, Whitefly Biology Session, Third International *Bemisia tabaci* Workshop, Barcelona, Spain. March 16-20.
- 2003-2005 Virus Data Sub-committee of the International Committee on Taxonomy of Viruses
- 2005-2006 Co-Organizer; Session Coordinator and Moderator: Whitefly Biotypes and Genomics Session – Fourth International Whitefly Meeting, Duck Key Florida. December 3-8, 2006.
- 2006 Coordinator, IPM CRSP-Global Themes Africa. Dar Es Salam, Tanzania. Sept 14-18, 2006.
- 2006 Organizing Committee/Session Moderator-Fifth International Geminivirus Symposium-Ouro Preto, Brazil; May 20-25, 2007.
- 2007 Symposium Organizer/Session Moderator: Cotton Diseases-The World Cotton Conference, Lubbock, TX. September 10-14, 2007.
- 2007 Scientific Consultant, Whitefly Biotypes and Geminiviruses: European Union-APHIS Trade Discussion, Brussels, Belgium. February 27-28, 2007.
- 2007 Organizer and Chair, Symposium on Whitefly Genomics and Proteomics, EWS Meeting, Aguadulce, Almeria, Spain October 20-24, 2008.
- 2007-09 Fifth International *Bemisia* Workshop 2009: Advisory Committee and Scientific Program Committee.
- 2007 Coordinator, IPM CRSP-Global Themes Africa, Yaoundé, Cameroon. October 22-24, 2007.
- 2008 Organizer, Whitefly Genomics Symposium, Third European Whitefly Symposium. Aguadulce, Almeria, Spain. October 20-24, 2008.
- 2009 Co-organizer w/ Dr. C. Rey, University of WITS ‘Whitefly-Omics Workshop’, Johannesburg, South Africa (March 13-15, 2009). Genomics and population biology strategies and transdisciplinary collaboration to elucidating whitefly-virus-cassava interactions ‘Roots, wings, capsids, and ...bioinformatics-computing’.
- 2009-2010 Organizing Committee, International ssDNA Virology Congress, Irapuato, Mexico November 7-12, 2010.
- 2010 Organizing Committee. Papa Rayada (Zebra Chip) Disease of Potato in Honduras. Siguatepeque, Honduras Aug 2-4, 2010.
- 2010 Organizing Committee, Management of viral diseases of vegetable crops workshop. IPM CRSP’s Global Theme on Management of Insect Transmitted Virus (IPVD) and regional project Science for Agricultural Growth in Latin America and the Caribbean (IPM-LAC) Honduras Site. Nov 21-22, 2010.
- 2012-2013 External Advisory Committee, 7th International Geminivirus Symposium and 5th ssDNA Comparative Virology Workshop, Hangzhou, China Nov 3-9, 2013.
- 2012-2013 Organizing Committee 6th International *Bemisia* Workshop, Crete, Greece.

- 2015-2016 External Advisory Organizing Committee, 13th International Plant Virus Epidemiology Symposium June 6-10, 2016. Avignon, France.
- 2016 National Academy of Sciences, U.S.-Egypt Science & Technology Joint Fund Grant Selection Committee Meeting, Cycle 17, Cairo, Egypt Jan 31-Feb 2, 2016.
- 2015-2016 External Advisory Committee, 8th International Geminivirus Symposium and 6th ssDNA Comparative Virology Workshop, New Delhi, India Nov 7-10, 2016.
- 2016 University of Agriculture Faisalabad, Pakistan, Office of Registrar Technical Review Panel, Dr. Nawaz-ul-Rehman.
- 2017-2018 Co-Organizer Symposium, India-US Science & Technology Forum, Punjab Agricultural University Dec 4-5 2017. Curbing whitefly-plant virus pandemics - the departure from pesticides to genomics solutions. Grant to: J.K. Brown, UA and Pankaj Rathore, Punjab Agricultural University, Ludhiana; final report, May 2018.
- 2019-present Organizing Committee, 9th International Geminivirus Symposium and 7th ssDNA Comparative Virology Workshop, UC-Davis, Davis, CA. November 9-13, 2019.
- 2019-2020 National Academy of Sciences, U.S.-Egypt Science & Technology Joint Fund Grant Selection Committee Meeting, Cycle 18.

Extramural-Reviewer

- 1999-present Virus Data Sheets for CAB International
- 2001 Reviewer 'Introduction to Botany' Text Book (7 Chapters) (Benjamin/Cummings Science AW Longman Publishers)
- 2002 Reviewer 'Plant Biology' Text Book (7 Chapters) (Cole Publishers).
- 2004 Final Reviewer 'Introduction to Botany Text Book (3 Chapters) Benjamin Cummings Science AW Longman Publishers
- 2005 Judge, INTEL National Science Fair, Phoenix, AZ, May 2005
- 2005 Reviewer, REF Matthews Revised Text Book Plan (R. Hull).

INVITED SEMINARS, SYMPOSIA & MEETING PRESENTATIONS - Chronological 1990-present

- 1990**
- Symposium: Sweetpotato whitefly-mediated vegetable disorders. Tropical Research and Education Center, Homestead, Florida. February 1990.
- Seminar: Differential detection of whitefly-transmitted geminiviruses by hybridization analysis using non-radioactive probes. Rio Piedras Experiment Station, University of Puerto Rico. May 1990.
- Symposium: Biotypes of the sweetpotato whitefly. 73rd Annual Conference of the Florida Entomological Society, Cancun, Mexico. August 1990.
- Seminar: Biotypes of *Bemisia tabaci* and evidence for the introduction of a virus-vector in the US and Caribbean Basin, Univ. of Florida, Gainesville, Florida. September 1990.
- 1991**
- Seminar: Ultrasensitive detection and relationships among whitefly-transmitted geminiviruses by DNA-DNA hybridization analysis, University of Puerto Rico-Mayaguez; February 6, 1991.
- Seminar: Biological and Genetic Evidence for a New Biotype of Whitefly: Vector of geminiviruses in the southwestern US. University of California, Riverside, California. March 1991.
- Presentation: Characterization of whitefly-transmitted geminiviruses and whitefly populations. Eighth Biennial Pepper Conference, May 29-31, 1991; Weslaco, Texas.
- Presentation: Biotypes and whitefly-transmitted geminiviruses in the Western Hemisphere. Whitefly/Geminiviruses Round Table, Rothamsted Experimental Station, September 19, 1991; Harpenden, United Kingdom.
- Seminar: Emergence of a biological and genetic variant of *Bemisia tabaci* in North America and the Caribbean Basin. University of California, Davis, California. November 6, 1991.
- Seminar: Relationships between whitefly-transmitted geminiviruses by DNA-DNA hybridization and cluster analysis, CINESTAV; Unidad Irapuato; Irapuato, Gto., Mexico, November 23, 1991.

Presentation: Whitefly-transmitted viruses and associated disorders of vegetable crops in North America and the Caribbean Basin. Symposium: Advances in Whitefly Research; Entomological Society of America, Reno, Nevada, December 1991.

1992

Presentation: The status of *Bemisia tabaci* biotypes as pest and virus vectors in cotton and adjacent host plant species at Beltwide Cotton Production Research Conference, Nashville, TN; January 1992.

Presentation: Diseases caused by whitefly-transmitted geminiviruses - a disaster in the making? AAB/BSPP Tropical Plant Virology University of York, April 9, 10, 1992.

Seminar: Evidence for an introduced biotype of *Bemisia tabaci* in the Western Hemisphere, Departments of Entomology and Plant Pathology; Louisiana State University, Baton Rouge, Louisiana; April 23-24, 1992.

Presentation: A critical assessment of biotypes of the sweetpotato whitefly in the Americas and adjacent locales. Central American/Caribbean Regional Conference: Taller Centro Americano y Del Caribe Sobre Moscas Blancas, CATIE, Turrialba, Costa Rica, August 3-5, 1992.

Presentation: The status of the B biotype - evidence for an exotic vector species of whitefly, Center for Insect Sciences, Univ. of AZ, Tucson, Arizona. October 9, 1992.

1993

Seminar: Evidence for the worldwide introduction of new biotype and the impact of a new whitefly virus-vector, *Bemisia tabaci*. Distinguished Lecture Series, Department of Plant Pathology and Microbiology, Texas A&M University, College Station, Texas; March 3, 1993.

Presentation: Mechanisms of whitefly-mediated transmission of geminiviruses. Plenary Session Lecture, PAC/APS meetings, Tempe, Arizona. April 15-16, 1993.

Presentation: Current status of *Bemisia tabaci* biotypes and the associated diseases in the Americas and adjacent locales. Plenary Session Lecture, PAC/APS meetings, Tempe, Arizona. April 15-16, 1993.

Presentation: Molecular methods for detecting viruses in plants and insect vectors. Symposium: Entomological Society of America, Indianapolis, IN. December 1993.

1994

Seminar: Is the coat protein gene a biological and molecular determinant of whitefly-transmitted geminiviruses. Texas A&M University, College Station, TX January 12, 1994.

Seminar: DNA analysis of the coat protein gene: biological and evolutionary implications for whitefly - transmitted geminiviruses. Department of Plant Pathology, Auburn Univ, Auburn AL. February 16, 1994.

1995

Seminar: Plant Viruses of Cotton: Past, Present, and Future. Monsanto, St Louis, MO January 23, 1995

Seminar: Evidence for the introduction of an exotic whitefly vector and the emerging status of subgroup III Geminiviridae. Arizona State University, Tempe, AZ. April 3, 1995.

1996

Seminar: Molecular markers for investigating exotic whitefly vector populations, and the molecular epidemiology of whitefly transmitted geminiviruses. Department of Plant Pathology, Ohio State University, May, 1996.

Seminar: Introduction of an exotic whitefly vector and its role in the emergence of whitefly-transmitted geminiviruses. EMBRAPA & The National Whitefly Committee, Sao Paulo, Brasil, November, 1996.

1997

Seminar: The coat protein as a phylogenetic marker and its role in whitefly-mediated geminivirus transmission. Department of Plant Pathology, Oklahoma State University, Stillwater, OK, March, 1997.

Seminar: Whitefly-transmitted geminiviruses of cotton. Cotton Growers Organization, Caborca, Sonora, Mexico. August 21, 1997. Delta Pine International.

Symposium: Diseases of Melons. Plant viruses that infect melons: worldwide perspective. American Phytopathological Society Proc. Caribbean Division Meeting, San Jose, Costa Rica, Nov 12-14, 1997.

1998

Seminar: Biological, biochemical, morphological, and molecular evidence that *Bemisia tabaci* (Genn.) comprises a tight group or species complex, but the A and B types do not constitute a separate biological species. Department of Entomology, The University of Arizona, October 21, 1998.

Seminar: Phylogenetically informative sequences for begomoviruses and an interactive website/database for virus identification. Department of Plant Sciences, University of Arizona. November 24, 1998.

1999

Presentation: Greenhouse Vegetable Growers Association: Whitefly-transmitted viruses and whitefly vector biotypes in Mexico and the US, Culiacan, Sinaloa, January 22, 1999.

Seminar: The affect of molecular variation within the *B. tabaci* group on begomovirus epidemiology. Department of Plant Pathology, The University of Arizona, February 12, 1999.

Seminar: Evidence for A *Bemisia tabaci* species complex and the influence of biotic variation on molecular epidemiology of begomoviruses. Department of Plant Pathology, Washington State University, Pullman WA. July 15, 1999.

Presentation: Current status of diseases incited by begomoviruses and their relation to particular *Bemisia* types or 'variants' in the Americas and Caribbean Basin. 8th Encontro Latin-Americano e do Caribe sobre Moscas Blancas e Geminiviruses. Recife, Pernambuco, Brazil. October 17-20, 1999.

Presentation: New and Emergent Cotton-Infecting Viruses Transmitted by Homopteran Vectors: New Problems of International Importance. 11th Brazilian Congress of Cotton, Ribeirao Preto, Brazil; September 6-14, 1999.

2000

Seminar: Evidence for a diverse whitefly vector of plant begomoviruses – evolution in the making. USDA Biological Control Laboratory-Montpellier, France. January 28, 2000

Seminar: Dept. of Entomology, Univ of Hawaii; March 10, 2000. Conceptualizing the *Bemisia tabaci* species complex: biotypes, topotypes, and cytoplasmic incompatibility-*the making of a cryptic species?*

Seminar: Exelixis Pharmaceuticals, San Francisco, CA February 23, 2000. The *Bemisia tabaci* species complex: pest and begomovirus vector-here to stay.

Seminar: Viruses of Cucurbit Crops. Arizona Vegetable Growers Annual Meeting, Maricopa Agriculture Center, February 22, 2000.

Seminar: Molecular markers for detection and identification of whitefly-transmitted geminiviruses. INIFAP, Obregon Mexico, June 2000.

Seminar: Phylogenetic relationships between begomoviruses and whitefly biotypes from Puerto Rico by analysis of coat protein and mt cytochrome oxidase I genes and evidence for congruence between the two trees. University of Puerto Rico, Rio Piedras, PR, October 3, 2000.

2001

Seminar: Diversity of begomoviruses and their whitefly vector and aftermath of an invasive vector episode. University of California, Riverside, CA. April 30, 2001.

Plenary Talk APS Caribbean Divison Meeting, Havana, Cuba, June 11-15, 2001. Begomovirus coat protein and whitefly mt cytochrome oxidase I gene trees are concordant - accurate predictors of the origin of viral species and vector genotypes.

Presentation: Phylogeographical relationships and population studies to elucidate variation, origin, distribution, and population dynamics for the *Bemisia tabaci* complex. Integrated Pest Management Regional Committee - WCC-185; Lake Tahoe, Nevada. October 10-12, 2001.

Presentation: Whitefly-transmitted geminiviruses of cucurbits in the Sonoran Desert. Cucurbit Workshop, University of Sonora, Hermosillo, Sonora. November 8, 2001.

Seminar: Diversification of Begomoviruses. Department of Plant Pathology, University of Arizona, Tucson, AZ November, 2001.

2002

Presentation: Begomoviruses, A Global Perspective. Harris Moran Seed Company, Nantes, France January 18, 2002.

Plenary Presentation: Diversity of begomoviruses and the whitefly vector in the US Sunbelt States: An Overview. Fifth Annual Progress Review; Research, Action, and Technology Transfer Plan, February 10-12, 2002, San Diego, CA.

Presentation: Standardizing regional approaches for molecular identification of begomoviruses and their whitefly vector. CIRAD, Port au Pitre, Guadeloupe, Eastern Caribbean (French West Indies), March 4, 2002.

Presentation: Virus diseases of crops in the Southwestern Desert, Blythe, CA July 18, 2002.

Symposium. Prokaryotes associated with the whitefly *Bemisia tabaci*: a possible role in fitness and evolution of biotypes. APS Symposium, Milwaukee, WI July 2002.

Plenary: Begomovirus biodiversity. Jornadas Cientificas de Inauguración de las Nuevas Instalaciones de la Unidad de Bioquímica Y Biología Molecular de Plantas. CICY de Yucatan, Merida, Yucatan, Mexico. October 9-11, 2002.

Keynote: Brown, J.K. 2002. Tracing the origins of insect pests, vectors, and natural enemies. IOBC Symposium on Insect Biological Control, October 14-16, 2003. Montpellier, France.

Seminar: Mechanisms of begomovirus diversification. University of Florida-IRREC/USDA-ARS-USHRL Seminar Series, Ft Pierce, FL, November 15, 2002.

Symposium: Brown, J.K. 2002. Phylogeography of the *Bemisia tabaci* species complex: prospective factors underlying the evolution of biotypes. Entomological Society of America. Symposium Ft Lauderdale, FL November 17-20, 2002.

2003

Symposium: Considerations and constraints in Begomovirus-plant host-whitefly vector co-evolution. APS Annual Meeting, Charlotte, NC. August 7-13, 2003.

Symposium: Diversification of new and emerging begomoviruses that threaten US agriculture. American Phytopathological Society Annual Meeting, Charlotte, NC. August 7-13, 2003.

Keynote: Diversity of Begomoviruses of Malvaceous Hosts in the New World. International Workshop on Cotton Biotechnology, Dubai, United Arab Emirates. September 28-30, 2003.

Keynote: Molecular analysis of Cotton leaf curl complexes in Africa. International Workshop on Cotton Biotechnology, Dubai, United Arab Emirates. September 28-30, 2003.

Keynote: Bean-infecting begomoviruses in the Americas. Annual Meeting, Bean Improvement Cooperative. Sacramento, CA. October 29-31, 2003.

Keynote: Diversification of begomoviruses probably involves both plant host and vector adaptations. IOBC/WPRS Working Group on Protected Crops in the Mediterranean Climate Congress. Agadir, Morocco. November 30-December 04, 2003.

Symposium: Profiling and Identification of 'Early' Plant Genes Involved in Plant-Virus-Insect Vector Interactions. Southwest Consortium on Plant Genetics and Water Resources -18th Annual Symposium. December 12-14, 2003. Lake Arrowhead, CA.

2004

Symposium: From one species to many or many species to one – the case of the genus: *Begomovirus*. American Phytopathological Society Meeting, July 30- Aug 4, 2004. Anaheim, CA.

Symposium: Interface between the anatomy of the whitefly vector *Bemisia tabaci* and begomoviral capsid determinants involved in transmission. American Phytopathological Society Meeting, July 30- Aug 4, 2004. Anaheim, CA (with Cicero, J.).

Symposium: The begomovirus-*Bemisia tabaci* transmission pathway: CP mutants to track ingestion, acquisition, and transmission. *Symposium in Honor of the Retirement of Sandy Purcell*. Entomological Society of America, November 14-17, 2004. Salt Lake City, UT.

Symposium: Proteome profiling of the early and late responses of *Lycopersicon esculentum* to biotic stresses (co-PI P. Haynes). 19th Annual Symposium of the Southwest Consortium on Plant Genetics and Water Resources. October 21-23, 2004.

2005

Seminar: The *Bemisia tabaci* complex. The Arizona Cotton Council. April 19, 2005. Phoenix, AZ.

Seminar: Multidisciplinary approaches to address pathogen-vector complexes. USDA-ARS, May 12, 2005. Parlier, CA.

Seminar: The *Bemisia tabaci* complex: Cryptic species/Insect pest/Plant virus vector of international importance. California State Department of Agriculture, June 14, 2005. Sacramento, CA.

Seminar: Does the *Bemisia tabaci* complex comprise biotypes, haplotypes, and/ or races? WCC66 Regional Coordinating Committee for Russian Wheat/Cereal Aphids. September 19-20, 2005. Ft. Collins, CO.

2006

Whitefly-transmitted geminiviruses/whitefly biotypes to CAADES Tomato Growers Group, Culiacan, Sinaloa, Mexico. January 29, 2006.

Origin of the Q biotype and global view of the genetics of the whitefly *Bemisia tabaci*. Q-TAC Special Meeting, held April 3, 2006 [with the Fifth International Integrated Pest Management Meeting, St. Louis, MO April 4-6, 2006].

Divergent CI-bacteria partially impede and/or rescue gene flow in the whitefly vector *Bemisia tabaci*: Host preference- and geographical- barriers may be less important for this cryptic species.

Department of Plant Pathology, Washington State University, March 20, 2006. Pullman, WA.

Presentation: Plant viruses in the Arizona Desert. High Desert Conference, Sierra Vista May 5, 2006.

New Problems on the Horizon for Greenhouse Grown Tomatoes. Greenhouse Crop Production & Engineering Design Short Course (for Syngenta Seeds & Ahern International). CEAC-University of Arizona, Tucson, AZ. June 6-8, 2007. (Invited speaker; 2 lectures).

New and Emerging Insect Vector Borne Viruses and Pathogens of Tomato in the Tropical Americas. First International Tomato Congress, Guadalajara, Jalisco, Mexico, July 19-21, 2006.

New and emerging virus-vector complexes. The University of Arizona-College of Agriculture & Life Sciences Annual Fall Conference, August 16, 2006.

Plenary: From one species to many - Diversification of begomoviruses in the American Tropics. American Phytopathological Society-Caribbean Division Meeting, Cartagena, Colombia, September 11-15, 2006.

Seminar: Exploring capsid determinants and the whitefly-begomovirus transmission pathway.

Department of Entomology, The University of Arizona, October 5, 2006.

Presentation: USAID-CDR Workshop-Cassava Resistance to Begomoviruses: Diversification in begomoviruses-emergent plant viruses in the tropics. October 31-Nov 3, 2006.

Presentation: USAID-CDR Workshop-Cassava Resistance to Begomoviruses: The biotype concept for *Bemisia tabaci*: the whitefly vector of begomoviruses, Mozambique. October 31-Nov 3, 2006.

Presentation: Plant viruses of cucurbit crops in the Sonoran Desert. Cucurbit Producers Group, Hermosillo, Sonora, and Caborca, Sonora Mexico. November 26-28, 2007 (2 lectures).

2007

In State

Invited lecture CEAC Short Course: New Problems for Greenhouse Grown Tomatoes. Greenhouse Crop Production & Engineering Doubletree Inn, Tucson Arizona. January 12-14, 2007.

Presentation: *Cucurbit yellow stunting disorder virus*-an introduced plant virus. Yuma County Melon Growers, Yuma AZ. February 1, 2007.

CYSDV Task Force Update: The Exotic *Cucurbit yellow stunting disorder virus*-what we know and don't know. Yuma, AZ. April 11, 2007.

Training workshop: Plant Viruses of Vegetables/Vegetable Seedlings & National Plant Diagnostics Network. In-Service Training-Cooperative Extension. Tucson, AZ. May 17, 2007 (U. Schuch, Organizer).

Seminar: The new threat of *Cucurbit yellow stunt disorder virus* to Arizona and the region. Desert Agriculture Conference, Casa Grande, AZ. May 10, 2007 (AZ Crop Protection Association, Organizers).

Presentation: Cucurbit yellow stunting disorder virus and whitefly vector distribution in Arizona and Sonora. CYSDV Workshop, Yuma. July 25, 2007 (K. Nolte, Organizer).

Workshop: Emerging plant viruses of vegetable seedlings and vegetable crops: characteristics, control, and diagnostics. Arizona Highlands Garden Conference, Coop Extension: Master Gardeners of Gila, Yavapai, Coconino & Navajo Counties. Oct 11-12, 2007. San Carlos, AZ (C. Jones, Organizer).
TRIF/NPDN Outreach: 'Telediagnosics and The Plant Diagnostics Network for Arizonans'. Cochise County Extension Conference Room, Willcox, AZ. December 17, 2007 (TRIF Team and R. Call, Organizers).

National

Lecture: Kansas State University ADVANCE Distinguished Lecture Series. (1) The Whitefly Genome project-Early stages and progress; (2) Capsid determinants and whitefly-begomovirus interactions involved in transmission. March 28-29, 2007.

International

Consultant: The *B. tabaci* biotype concept, biotypes, and whitefly transmitted viruses'. Scientific Consultant to USDA-APHIS-European Union Plant Health Regulators meeting. Brussels, Belgium Feb 25-28, 2007.

Symposium: Exploring whitefly vector-*Squash leaf curl virus* interactions. International Geminivirus and ssDNA Meeting, Ouro Preto, Brazil May 20-26, 2007.

Plenary: Current Discussions in Geminivirus Taxonomy-Plenary Session. International Geminivirus and ssDNA Meeting. Ouro Preto, Brazil May 20-26, 2007.

Conference: Emerging Insect Vector Borne Viruses and Pathogens of Tomato in the Tropical Americas. Second International Tomato Congress, Guanajuato, Mexico. July 11-13, 2007.

Distinguished Lecturers Program; Hangzhou University, Hangzhou, China. November 16-19, 2007 (*Four-Lecture Series*).

Seminar: *Cucurbit yellow stunting disorder virus*-A region wide pandemic. Workshop Sponsored by Harris Moran-Mexicana in Hermosillo, Sonora. December 18, 2007.

2008

In State

CEAC Tomato Production Short course, History and update on the status of *Tomato yellow leaf curl virus* in the U.S. and American Tropics. Holiday Inn, Tucson, AZ; January 23, 2008.

CYSDV Workshop-Status of the disease and epidemiology update. Yuma Extension Center Auditorium. Yuma, AZ, February 11, 2008. Organizer, Dr. Kurt Nolte.

Telediagnosics and update on emergent vector-borne viruses in Arizona. Agriculture Day 2008, Willcox, AZ, February 6, 2008. Organizer, Dr. Rob Call.

First Detector Training and Telediagnosics (TRIF/AZPDN) for Master Gardeners. Phoenix, AZ. March 25, 2008 (Organizer, Erin Taylor).

Telediagnosics and *Tomato yellow leaf curl virus*, an introduced whitefly-borne begomovirus in Arizona. Master Gardeners Meeting, Speaker. Sierra Vista, Arizona. May 1, 2008. Host: Dr. Rob Call.

Tomato chlorotic dwarf viroid – a new viroid in controlled environment tomato production. Ontario Vegetable Producers. Leamington, Ontario. May 12, 2008.

Actualización en Vectores y virus del Tomate en la costa oeste de México. Culiacan, Sinaloa; Los Mochis, Sinaloa, Mexico May 21-23, 2008. Tomato Productores of Sinaloa.

Arizona Plant Diagnostics Network Workshop, 'Training the Trainers to Train First Detectors'. Maricopa Agriculture Center, Maricopa, AZ. May 27, 2008. Organizer and Presenter, Brown, J.K.

Epidemiology and Management of CYSDV. Annual Winter Workshop, Holtville, CA. November 4, 2008. (Host, Eric Natwick).

National

Plenary: IPRI Biotype Workshop. Phylogeny (COI) of haplotypes and biotypes, and cytoplasmic incompatibility-induced reproductive barriers in the *Bemisia tabaci* complex. Ft Collins, CO. February 13, 2008.

Seminar: Arizona State University, Biophysics Department Interdisciplinary Seminar Series. Mapping the *Pepper golden mosaic virus*-Distortion strain recovery phenotype to the 5' upstream BL1 region, and evidence for low viral abundance in the phloem. October 1, 2009.

International

Seminar: 'Begomoviruses: emerging pathogens and diversification'. Swedish Agricultural University, Uppsala, Sweden September 4, 2008.

Plenary: Hadjistyli, M., Brown, J.K., and Roderick, G.K. 2008. 'Microsatellites shed light on the population biology of the *Bemisia tabaci* complex'. Third European Whitefly Symposium. Aguadulce, Almeria, Spain. October 20-24, 2008.

2009

In State

'Telediagnosics, TRIF, and NPDN-Focus on introduced whitefly-transmitted viruses'. Coconino County Extension. Peach Springs, AZ March 18, 2009. Host: Terry Crowley.

Progress in *Cucurbit yellow stunting disorder virus* research. Pre-Fall Vegetable meeting, University of Arizona, Cooperative Extension, Yuma, AZ. August 26, 2009. Host: Kurt Nolte.

Update on Cucurbit yellow stunting disorder virus research. University of Arizona, Cooperative Extension Meeting, Maricopa County, July 16, 2009. Host: Erin Taylor.

Seminar: 'Update on the Whitefly Proteome'. USDA Seminar Series, USDA-ARS, Arid-Land Agricultural Research Center. October 19, 2009. Host: Steve Castle.

Speaker: Citrus Greening Disease. Desert Horticulture Conference. Pima County Coop. Extension, Convention Center Tucson, AZ. Nov 14, 2009. Host: Ursula Schuch.

National

Symposium: Globetrotting Pathogens Symposium: 'Capsids with wings'. Office of International Programs, American Phytopathological Society, Aug 1-5, 2009, Portland, OR.

Symposium: New Nuances of Insect Transmitted Viruses Symposium: '-Omics for exploring whitefly-begomovirus interactions'. Virology Committee. American Phytopathological Society, Aug 1-5, 2009, Portland, OR.

Symposium: Characterization of a vein-greening disease of tomato and its' psyllid vector in commercial tomato greenhouses in Arizona. Joint Research Conference on HLB/ACP and Zebra Chip in Texas. McAllen, TX. Nov 16-18, 2009.

Symposium: Vector-virus Interactions in Agroecosystems: Approaches, Advancements, and Limitations symposium: 'Progress toward a whitefly proteome'. Entomological Society of America. Indianapolis, IN, December 13-16, 2009.

International

Symposium: 'Whiteflies as vectors and whitefly-begomovirus transmission'. 2009. Plant Protection Dept., University of Tarapaca, Chile. January 7, 2009.

Symposium: 'Begomovirus-whitefly co-evolution and diversification'. Brown, J.K. 2009. Pages 129-133. Latin American Phytopathology Congress, Chile January 12-16 2009.

Symposium: 'Preliminary molecular characterization of the whitefly-begomovirus complex present in the region of Arica and Parinacota, Chile'. 2009. I.M. Rosales, P. Sepulveda, G. Sepulveda, and Brown, J.K. Pages 134-137. Latin American Phytopathology Congress, Chile January 12-16 2009.

Seminar: Whitefly-geminivirus interactions and RNAi approaches for engineering. The University of Jordan, Amman, Jordan. March 1-4, 2009.

Workshop: Phylogenetic biology of the *Bemisia tabaci* sibling species complex. University of Witwatersrand-The University of Arizona Joint Genomics Workshop on Functional Genomics of Whitefly-Virus-Host interactions. University of Witwatersrand, Johannesburg, South Africa. March 30-April 3, 2009.

Workshop: Progress toward a whitefly proteome. University of Witwatersrand-The University of Arizona Joint Genomics Workshop on Functional Genomics of Whitefly-Virus-Host Interactions. University of Witwatersrand, Johannesburg, South Africa. March 30-April 3, 2009.

2010

In State

Biology of leafhopper transmitted geminiviruses in the genus *Curtovirus* in Arizona. Southeastern Agriculture Day, Willcox, AZ. February 3, 2010.

Maricopa Ext Lecture on Plant Pathology; National Plant Diagnostics Network-First Detector Certification Program, Phoenix, AZ April 6, 2010.
 Cochise County Master Gardeners; Lecture on Plant Pathology; First Detector Training, Sierra Vista, April 21, 2010.
 Seminar: A tale of plant virus-host interactions: *Pepper golden mosaic virus* recovery and virulent genotypes. Applied Biosystems and Engineering Dept., The University of Arizona, Tucson. October 4, 2010.
 Seminar: Exploring the whitefly proteome and transmission-related biomarkers. School of Plant Sciences, The University of Arizona, Tucson. November 2, 2010.
 National Plant Diagnostics Network-First Detector Certification Program. Mesa, AZ Mesa Public Safety Training Center, Dec 7, 2010; Tucson, AZ (Holiday Inn-Palo Verde) Dec 8, 2010.

National

UA-Biology Group Presentation: Systems Biology and Genetic Engineering of *B. braunii*. NAABB Upstream Conference Ann Arbor, MI. July 8-9, 2010.

International

Conference: Papa Rayada (Zebra Chip) Diseases of potato in Honduras: Characterization of vein-greening disease of tomato and psyllid vector: a problem in field and greenhouse grown tomato and pepper; Diagnostics for detection of *Ca. Liberibacter solanacearum* in plants and insects. Liberibacter Workshop. Siquatepeque, Honduras Aug 2-4, 2010.
 Symposium: Brown, J.K. Molecular and cellular aspects of whitefly-mediated transmission of begomoviruses. Geminivirus Workshop, New Delhi, India Aug 27, 2010.
 Symposium: The contribution of an alphasatellite-like molecule to symptom severity when in the presence of a begomovirus-beta satellite complex infecting tomato in Oman. Sixth International Geminivirus Symposium/Fourth International Comparative ssDNA Virus Workshop, Guanajuato, Mexico. Nov 7-12, 2010.
 Symposium: Evidence for a new taxonomic grouping for Swepoviruses'. Sixth International Geminivirus Symposium/Fourth International Comparative ssDNA Virus Workshop, Guanajuato, Mexico. Nov 7-12, 2010.
 Conference: Management of viral diseases of vegetable crops. IPM CRSP's Global Theme on Management of Insect Transmitted Virus (IPVD) and regional project Science for Agricultural Growth in Latin America and the Caribbean (IPM-LAC) Honduras Site. Presentations: *Candidatus Liberibacter solanacearum*; Persistent and semi-persistent transmission of aphids, whiteflies, leafhoppers, and thrips; Emergent viruses in the Solanaceae and Cucurbitaceae; Disease diagnosis and cultural practices in greenhouse grown crops. Comayagua, Honduras. Nov 22-23, 2010.
 Seminar: University of Greenwich, Greenwich, UK. Whitefly biology - studying discrete populations at the genetic, transcriptomic and proteomic levels. Dec 16, 2010.

2011

In State

First Detector Training, Yuma County Master Gardeners, Yuma AZ 9-12:00, Jan 28, 2011.
 First Detector Training, Cochise County Master Gardeners, Sierra Vista, AZ Jan 9, 2011.

National

Plenary: 'From biotypes and phylogenetic biology, to new generation sequencing technologies to unravel the mysteries of the *Bemisia tabaci* sibling species complex'. APS-Caribbean Division-Entomological Society Southern Division joint meeting. San Juan, Puerto Rico, March 20-23, 2011.
 Seminar: Colorado State University, Ft. Collins. *Liberibacter solanacearum* and the potato psyllid: an unusual emergent bacterial-hemipteran vector complex in potato and tomato. April 13, 2011.
 Presentation: Progress on the whitefly and psyllid transcriptomes. 7th Meeting of the International Aphid Genomics Consortium. Plaza Marriott, Kansas City, MO. June 8-9, 2011.
 Symposium 'Management of Insect-Transmitted Plant Virus Diseases in the Tropics': *Whitefly vector populations in relation to virus ecology and management*. American Phytopathological Society National meeting, Honolulu, HI. Aug. 6-10, 2011.

Symposium: Use of omic approaches to study transmission of plant pathogens'. *Transcriptomics to illuminate Ca. Liberibacter solanacearum*-*o*-potato psyllid interactions. Entomol. Soc. of America National Meeting, Reno, NV Nov 13-16, 2011.

International

New generation sequencing for integrating plant breeding and transgenic protection to managing cotton-infecting begomoviruses: University of Punjab, Lahore and Cotton Research Institute-Multan. Aug. 27, 2011.

Historical overview and current status of the *Bemisia tabaci* sibling species group. Plant Protection Institute, Guangdong Academy of Agricultural Sciences, Guangzhou, China. Oct. 20, 2011.

Research Station visit and presentation: Fortaleza, Brazil. Whitefly-transmitted viruses of melons in the subtropics. Dec. 6, 2011.

2012

In-State

Arthropod borne viruses of common bean and their management in the Sonoran Desert, Healthy Beans for Healthy Arizona Alliance, Maricopa Agriculture Center, Maricopa, AZ; Nov 28, 2012.

Proposed research and pipeline for clean up and virus testing for seedborne viruses: tepary bean for Arizona, Healthy Beans for Healthy Arizona Alliance, Maricopa Agricultural Center, Maricopa, AZ; Nov 28, 2012.

Introduction to the Arizona Plant Diagnostics Network: Arizona Wine Growers Association, Yavapai College, Arizona. Dec 2, 2012.

National

Brown, J.K. Transient culturing of *Ca. Liberibacter solanacearum* from a 'pure' culture of gut-inhabiting forms to complete Koch's Postulates: A tractable surrogate study system for HLB. Ft Pierce, FL, April 20, 2012.

Brown, J.K. Recent revelations among Old and New (?) World geminiviruses; Invited Speaker-Virology Forum: Noble Foundation, Ardmore, OK, May 4, 2012.

Brown, J.K. Parallel proteome-transcriptome enabled interrogation of whitefly effectors involved in begomovirus-vector interactions in: Virology Committee Symposium: Genetics, Genomics, and Proteomics Approaches to Elucidate Arthropod-vector Specificity. American Phytopathological Society Annual meeting, Providence, Rhode Island, Aug 4-8, 2012.

Fisher, T. W., Vyas, M., and Brown, J.K. Cellular interactions, and transcript profiling of *Candidatus Liberibacter asiaticus* and *solanacearum* during psyllid infection and vector-mediated transmission (Fisher, Vyas, and Brown) in: Virology Committee Symposium: Genetics, Genomics, and Proteomics Approaches to Elucidate Arthropod-vector Specificity, American Phytopathological Society, APS meeting Providence, Rhode Island, Aug 4-8, 2012.

Vyas, M., T.W. Fisher, and Brown, J.K. Comparative functional genomics to elucidate psyllid-'*Ca. Liberibacter asiaticus*' and *solanacearum* interactions. Virology Committee Symposium, Genetics, Genomics, and Proteomics Approaches to Elucidate Arthropod-vector Specificity, APS Annual Meeting, August 4-8, 2012. Providence Rhode Island.

International

College of Agriculture Seminar: Probing the transmission pathway using a parallel proteomic-transcriptomic approach. Saudi Arabia King Saud University, Riyadh, May 14, 2012.

Plant Pathology Department Seminar: From biotypes and phylogenetic biology to new generation sequencing technology to unravel the mysteries of the *Bemisia tabaci* sibling species group; Saudi Arabia King Saud University, Riyadh, May 15, 2012.

Symposium: Whitefly proteomics and gene expression analysis to probe interactions between whitefly-begomovirus complexes. First International Congress of Biotechnology and Biodiversity and Ninth International Banana Forum. Guayaquil, Ecuador, May 28-31, 2012.

Lecture: Introduction to plant viruses (Part I); Geminiviruses & begomovirus diversification (Part II). Biotechnology Research Center of Ecuador to the Polytechnic School (CIBE-ESPOL), June 5, 2012.

Lecture: First discovery of monopartite genomes in the Americas: Old or New (?) World geminiviruses
Biotechnology Research Center of Ecuador to the Polytechnic School (CIBE-ESPOL), June 5, 2012.

Symposium: Progress on transformation of the green alga *Chlorella protothecoides*, and development of a molecular diagnostic for differentiating microalgae Mexico, Puerto Morelos, Quintana Roo, Mexico April 23, 2102.

Symposium: Toward transformation of the green microalga *Chlorella protothecoides* & molecular markers for differentiating algal species. CICY, Merida, Mexico, June 12, 2012.

Formal Report: SNP identification to trace CLCuV and associated satellite lineages in relation to resistance genes based on evolutionary significant units and host symptoms. Cotton Virus Project: Progress Workshop, July 8-10, 2012.

Lecture: Parallel proteome-transcriptome enabled interrogation of whitefly effectors involved in begomovirus-vector interactions. IAGS, University of Lahore, Pakistan, July 8-10, 2012.

Diseases of vegetable crops caused by insect-transmitted viruses and the potato psyllid-transmitted *Ca. Liberibacter solanacearum* in Latin America and the Caribbean Region. IPM CRSP Symposium on Research and Management of Insect-transmitted Virus Diseases in Vegetables in the Tropics and Subtropics. Tamil Nadu Agricultural University, Coimbatore, India, July 10-13, 2012.

Overview of whitefly-transmitted cotton-infecting viruses and the whitefly vector: *a global perspective*. *Cotton leaf curl virus* Workshop, Islamabad, Pakistan. September 4-8, 2012.

SNP identification to trace CLCuV and satellite lineages: genetic diversity, symptoms severity, and evolutionary significant units. *Cotton leaf curl virus* Workshop, Islamabad, Pakistan. September 4-8, 2012.

Emerging viral pathogens of economic concern to the American Tropics. International IPM meeting, Tegucigalpa, Honduras, Oct 17-19, 2012.

2013

In State

Biofilms and yellow dragons. College of Agriculture, Spring Awards Luncheon. Featured Speaker, University of Arizona, Tucson, AZ, March 22, 2013.

National

Characterization of vein-greening disease of tomato and psyllid vector in Arizona. Invasive species working group, Portland, OR April 4, 2013.

Cotton leaf curl disease Recovery Plan, National Plant Disease Recovery System, Arlington, VA, April 15, 2013.

Psyllid-Liberibacter complexes: Emerging vector-pathogens. National Plant Disease Recovery System, Arlington, VA, April 15, 2013.

Mechanisms of Begomovirus Expansion-The panacea of host resistance genes: inadvertent selection of resistance-breaking viruses in a center of extreme diversity. APS-MSA Meeting Symposium, Austin, TX, August 4, 2013.

Cacao swollen shoot virus (CSSV)diagnostics and genetic diversity. USDA-ARS Subtropical Horticultural Research Station, Miami CSSV Aug 26, 2013.

International

Whitefly *Bemisia tabaci* and effects on virus disease epidemiology in contrasting study systems in Central America and sub-Saharan Africa (Brown et al), IPM CRSP Global Themes Symposium, 12th International Plant Virus Epidemiology meeting, Arusha, Tanzania, January 29, 2013.

Same vehicle, different engine: the dynamics of *Bemisia tabaci* populations driving Cassava virus disease pandemics in sub-Saharan Africa (Legg et al). 12th International Plant Virus Epidemiology Symposium, Arusha, Tanzania, January 28-Feb 1, 2013.

Plant viruses of alfalfa and legume crops, Invited Departmental Seminar, King Saud University, Riyadh, Saudi Arabia, May 5, 2013.

Begomovirus diversity, phylogeography, and population genetics in cultivated and uncultivated plant ecosystems in Pakistan. Biodiversity and Integrated Pest Management: Working Together for a Sustainable Future. Manado, North Sulawesi, Indonesia. July 4-7, 2013.

Cotton leaf curl virus disease complex: potential risk to world cotton production. Department of Vegetable Science, Punjab Agricultural University, Ludhiana, India. July 26, 2013.

Cotton leaf curl virus disease complex: a potential risk to world cotton production, Cotton Production Institute, Urumqi, China, July 29, 2013.

Plant virus evolution, The National Science Plan Workshop, King Saud University, Riyadh, Saudi Arabia, September 2, 2013.

Introduction to Phylogenetic Analysis, Workshop Lecture, King Saud University, Riyadh, Saudi Arabia, September 13, 2013.

Mechanisms of begomovirus expansion: the panacea of host resistance genes and selection of resistance-breaking viruses in a center of extreme diversity. College of Agriculture Seminar, King Saud University, Riyadh, Saudi Arabia, September 17, 2013.

A highly divergent begomovirus clade whose members are host-restricted to the Convolvulaceae, and extant in wild and cultivated species in the Eastern and Western Hemispheres, Invited Presentation, 7th International Geminivirus Symposium, 5th International ssDNA Comparative Virology Workshop, Hangzhou, China, November 3-9, 2013.

The whitefly *Bemisia tabaci* sibling (cryptic) species group- a taxonomic conundrum. Invited Seminar. Chinese Academy of Sciences, Institute of Vegetables and Flowers, Beijing, China, November 13, 2013.

Diversity and distribution of Cacao swollen shoot virus in wild host plants and mealybugs in Cote d'Ivoire (Brown and AKA Romain, presenter). National CSSV Planning Meeting, Bassam, Cote d'Ivoire, November 26-28, 2013.

2014

In-State

Speaker: Emergent and Invasive Psyllid-Liberibacter complexes. Western Plant Board 95th Annual Conference. Tucson, Arizona. March 24-27, 2014.

Lecture: About Plant Viruses. Prescott College, Prescott, AZ. June 24, 2014.

Lecture: Insect vector-borne viruses of legumes in the Desert Southwest: a pipeline for producing virus-free bean seed from infected germplasm seed. Prescott College, Prescott, AZ. June 24, 2014.

Seminar: Psyllid transcripts with potential involvement in *Ca. Liberibacter* invasion and propagative transmission: Toward RNAi mediated abatement of citrus greening and zebra chip diseases. Vet-Science Microbiology Seminar, University of Arizona Nov 10, 2014.

National

Workshop: Exploring the diversity of *Cacao swollen shoot virus* an emergent badnavirus of *Theobromus cacao* endemic in West Africa. Invited Presentation. Plant and Animal Genome meeting-Cacao genome project. San Diego, CA January 9-13, 2014.

Symposium: Molecular analysis of the *Bemisia tabaci* sibling species group: causal role in the Severe African cassava mosaic virus pandemic. Entomological Society of America, Pacific Branch meeting, Tucson, AZ April 8, 2014.

Seminar: Re-emergence of *Cacao swollen shoot virus* genomic variability and next steps to design diagnostics to support breeding, tree replacement, and molecular epidemiological studies in West Africa. USDA-ARS Tropical Horticulture Research Laboratory, Miami, FL June 19, 2014.

Symposium: *Ca. Liberibacter solanacearum*: a psyllid-transmitted, endemic and exotic, emergent fastidious prokaryote. Plant Virus-Vector Complexes in the Western US, APS-Pacific Division Meeting. Vector Symposium, Bozeman, MT July 8-11, 2014.

Presentation: Biotypes and phylogenetic biology of the *Bemisia tabaci* sibling species complex. Whitefly taxonomy workshop. Rio Piedras, Puerto Rico. August 31, 2014.

Presentation: Re-emergence of *Cacao swollen shoot virus*: unexpected genomic variability. USDA-World Cacao Foundation Workshop. Miami, FL Dec 4, 2014.

International

Plenary: Begomovirus diversity, phylogenetic and population genetics in cultivated and uncultivated plant ecosystem in Pakistan. Plant Pathology Conference, University of Punjab-Lahore, May 22-24, 2014.

College Seminar: Mechanisms of begomovirus expansion inadvertent selection of resistance-breaking viruses in a center of extreme diversity. Pakistan Agricultural University, Faisalabad, Pakistan. May 25, 2014.

Symposium: Comparative transcriptome analysis of Asian citrus and Potato psyllids harboring or free of *Ca. Liberibacter*: putative effectors involved in adhesion, immunity, nutrition, and endo-exocytosis-like processes. Invited Symposium Presentation, CIBE 2014 Guayaquil, Ecuador June 9-12, 2014.

Workshop: Functional genomics of the whitefly *Bemisia tabaci* (*B. biotype*) *begomovirus* transmission and dsRNA silencing of candidate genes expressed in the whitefly *Bemisia tabaci* (*B. biotype*) gut. USDA-USAID Focus on whitefly. International Institute for Tropical Agriculture, Dar es Salaam, Tanzania. Oct 20-23, 2014.

Presentation: Re-emergence and rapid spread of *Cacao swollen shoot virus*: greater than expected genomic variability. CacaoNet On-Farm Conservation & America's Cacao Breeder's Working Group Meetings, Oct 24-31, 2014.

2015

In State

Workshop: Citrus greening: biofilms and yellow dragons. USDA-APHIS Workshop, Phoenix AZ. Jan 29, 2015.

Organizer and Speaker; Historical overview and future outlooks for the AZPDN. 10th Anniversary Meeting, AZ-Plant Diagnostic Network, UA Campus-McClelland, Tucson, AZ Oct 27, 2015.

National

Workshop: *Cacao swollen shoot virus*: Virome-diagnostic development for a re-emergent, mealybug-transmitted virus spreading in West Africa. Cacao Genome Workshop, Plant & Animal Genome Conference Symposium. San Diego, CA Jan 11, 2015.

Seminar: Application of RNAi to interfere with insect transmission of citrus greening disease. UF Whitney Marine Biosciences Laboratory, Augustine, FL Feb 13, 2015.

Presentation: Re-emergence of *Cacao swollen shoot virus* in West Africa: evidence for extreme diversity and a possible virus complex. Insect Pests and Diseases of Cacao Workshop, Orlando, FL February 22-25, 2015

Symposium: *Zebra chip disease*. Evidence for *Ca. Liberibacter* invasion, adherence, and motility in the psyllid vector. Zebra Chip Symposium. Pacific Branch ESA, Coeur d'Alene, ID. April 14, 2015.

Symposium: *Seed transmission of vector borne pathogens*. Assessment of detection methods and the threat of *Candidatus Liberibacter* in seed and other propagative plant materials. American Phytopathological Society, Pasadena, CA July 31-Aug 5, 2015.

Seminar: Prospects for isothermal field detection of emerging viral pathogens of cacao, cotton, and cowpea. AGDIA, Elkhart IN Dec 13, 2015.

International

Seminar: Parallel proteome-transcriptome enabled interrogation of whitefly effectors of begomovirus transmission. Institute of Vegetables and Flowers, Chinese Academy of Sciences, Beijing, China. March 15, 2015.

Seminar: *Cotton leaf curl virus* complex: diversification and evolution of the resistance-breaking Burewala strain following release of a Multan-resistant variety. Plant Protection Research Institute, Guangdong Academy of Agricultural Sciences, Guangzhou China. March 19, 2015.

Seminar: Identification and characterization of a cyanobacterial pathogen of *Chlorella* species in the ARID raceway: *Vampirovibrio chlorellavorus*. CICY-Cancun, Quintana Roo, Mexico. June 3, 2015.

Seminar: Plant Protection Unit, University of West Indies. The *Bemisia tabaci* sibling species group: taxonomic conundrum and successful virus vector - a history and perspective. Nov 16, 2015.

Symposium and Panel Discussion: A global perspective on badnaviruses causing diseases of cacao. Cacao Research Center and Gene Bank, Port of Spain, Trinidad, Nov 17-18, 2016.

2016

In-State

Community Culinary Kitchen dinner speaker. Citrus greening disease and future prospects for lemons in Arizona. January 20, 2016.

Undergraduate Plant Science Club. Shantz Bld. Cacao swollen shoot virus-an emergent viral pathogen of the chocolate plant. Co-presented with N. Chingandu. March 25, 2016.

Maricopa County Master Gardeners (K. Young, host). Insect vectors of plant and fastidious bacterial pathogens in Arizona. Maricopa Co. Extension Center, Phoenix, AZ. April 20, 2016.

Desert Horticulture Annual Meeting, Tucson, AZ. Palo verde witches broom. U. Schuch and J.K. Brown. June 3, 2016.

National

Symposium: Pacific Branch-ESA symposium Animal and Plant Vector Biology: Addressing Old Questions with New Technologies. A cumulative model for *Liberibacter* invasion and circulation based on electron microscopy, functional genomics, proteomics, and yeast-2-hybrid analyses. April 6, 2016. Honolulu, HI. April 2-7, 2016.

Speaker: Fourth NPDN National Meeting Symposium. Advancing Diagnostics for Emerging Pathogens and Pests Affected by Global Trade and Climate Change. Spreading the Heat: Insect transmitted pandemic-associated pathogens concurrent with changing climate. June 11, 2016. Washington D.C. March 8-12, 2016.

Conference: Frontiers in Science and Technology for Cacao Quality, Productivity and Sustainability. An emerging tale of elusive badnaviruses infecting cacao in the Eastern Caribbean and East Africa. June 1, 2016. Penn State, College Park, PA. May 31-June 2, 2016.

Speaker: Badnaviruses associated with *Theobroma cacao* L. in West Africa and Trinidad. Mars Research Committee meeting, UC-Davis, Davis, CA. Aug 8, 2016.

International

Keynote speaker: Next-generation diagnostics: new prospects for etiological and epidemiological studies of plant viruses. June 7, 2016. Avignon, France. 13th International Plant Virus Epidemiology Symposium. June 6-10, 2016.

Symposium: An emerging tale of elusive badnaviruses associated with *Theobroma cacao* L. in West Africa. MARS Research Committee International Teleconference. June 16, 2016.

Seminar: Parallel proteome-transcriptome enabled interrogation of whitefly proteins involved in begomovirus transmission. Chinese Acad. Sci. Inst. Vegetables & Flowers, Beijing, China. June 23, 2016.

Seminar: The cotton leaf curl pandemic-A diagnostics dilemma. Plant Protection Research Institute, Guangdong Academy of Agricultural Sciences, Guangzhou, China. June 27, 2016.

Symposium, International Congress of Entomology. Orlando, FL Psyllid vector-*Liberibacter* interactions at cellular and molecular interfaces. September 26, 2016.

Keynote: *Cacao swollen shoot virus* in West Africa comprises a complex of species with variable genome and conserved protein domain arrangements. Regional Symposium: Next Generation Cocoa Research for West and Central Africa. IITA, Ibadan, Nigeria. November 9, 2016.

2017

In-State

Ca. *Liberibacter tactics* enabling invasion and circulative-propagative transmission by the psyllid host. USDA-ARS Arid-Land Agricultural Research Center, Maricopa, AZ March 27, 2017.

Genomic surveillance of cotton leaf curl associated viruses: A mobile, global threat. Cotton Breeder's Tour, University of Arizona, Sept 26, 2017.

Genomic surveillance of cotton leaf curl associated viruses: A mobile, global threat. USDA-ARS Arid-Land Agricultural Research Center, Maricopa, AZ Oct 3, 2017.

National

Insect Pests Workshop on Cotton. Whitefly gene knockdowns and mortality by orally-delivered dsRNAs silence gut and non-gut genes. Beltwide Cotton Conference, Dallas, TX. Jan 6, 2017.

Conference: Plant Diseases Workshop on Cotton. Global overview of Cotton leaf curl disease (CLCuD) complex. Beltwide Cotton Conference, Dallas, TX. Jan 5, 2017.

Symposium: Plant and Animal Genome Conference, Cacao swollen shoot virus comprises multiple species. San Diego CA Jan 13-16, 2017.

International

2017. Psyllid vector biology, Liberibacter-psyllid interactions. Psyllid-Liberibacter Workshop, Guatemala May 16-18, 2017.

Brown, J.K., Rast, T.J., Cicero, J.E., and Fisher, T.W. 2017. Psyllid vector-*Ca. Liberibacter* interactions at cellular and molecular interfaces. Third Hemiptera-Plant Interactions Symposium, Madrid, Spain, June 4-8, 2017.

Seminar: Cotton leaf curl disease dynamics using dual genomic pathology and molecular diagnostics. Plant Protection Institute Guangdong Academy of Agricultural Sciences Guangzhou, China, June 26, 2017.

Symposium: Begomoviruses and Whiteflies Symposium. Genomic surveillance of cotton leaf curl associated viruses. Seventh Asian Cotton Research and Development Network Meeting, Nagpur, India Sept. 15-17, 2017.

Keynote: Global historical perspective on the whitefly *Bemisia tabaci*: Setting the stage. Indo-US Science and Technology Forum-Sponsored Symposium, Ludhiana, India, Dec 1-2, 2017.

Symposium: Functional genomic analysis of whitefly *Bemisia tabaci*-begomovirus interactions. Indo-US Science and Technology Forum-Sponsored Symposium, Ludhiana, India, Dec 1-2, 2017.

Conference: Knowledge of whitefly vector-begomovirus dynamics to inform integrated disease management strategies: Case studies. 12th Arab Congress of Plant Protection, Hurghada, Egypt 5-9 November 2017.

2018

In-State

Viruses of grapevines: Vectors and diseases. Viticulture Workshop, University of Arizona. Cochise College, Benson AZ. March 23, 2108.

Circulative, propagative transmission up close: *Ca. Liberibacter* spp. exploits endo/exocytosis and cytoskeleton remodeling pathways in the psyllid vector. CALS Frontiers in Life Science Research Seminar, University of Arizona, Tucson, AZ. April 13, 2018.

Swollen shoot disease of cacao: the tale of an exotic plants' fate in a foreign land. UBRP Summer Program. University of Arizona. Tucson, AZ. June 6, 2018.

Cause of witches broom on blue palo verde. 2018. Joint authors: U. Schuch, S. Avelar and J.K. Brown. Annual Desert Horticulture Conference, Star Pass Marriott Hotel, Tucson, AZ. June 5, 2018.

Diseases caused by arthropod-transmitted virus and Liberibacter in southwestern desert crops. Progressive Farmers, UC-California-Riverside County Agriculture and Natural Resources, Coop Extension. June 21, 2018.

National

Workshop: Identification of a *Cotton leafroll dwarf* virus-like isolate infecting cotton in Alabama during 2017-2018

Beltwide Cotton Conference-Diseases, Jan 8-10,2019.

Workshop: PAG Cacao workshop. Genomic Characterization of the Cacao swollen shoot badnavirus 'species complex' in West Africa. San Diego, CA. Jan 12-16,2019.

Workshop: CSSD Badnavirus discovery and characterization to inform molecular detection. Pest and Diseases Workshop, MARS, Miami, FL. March 27, 2019.

Symposium: Classification and characterization of plant viruses identified by metagenomics approaches. Sequence based taxonomies for plant pathogens symposium. International Congress of Plant Pathology, Boston MA. International Congress of Plant Pathology meeting, Boston, MA Aug, 1, 2018.

Symposium: Cacao Swollen Shoot Virus: what we know and don't know after 100 years. Hot Topic Symposium Session on Cacao Diseases. International Congress of Plant Pathology, Boston MA. International Congress of Plant Pathology, Boston, MA. July 30, 2018.

International

Symposium: Emergent vector-borne DNA viruses of cotton and cacao – possible risks and routes of global spread. Joint Annual Entomological Society of America, Entomological Society of British Columbia Meeting, Vancouver, BC. Nov. 11-14, 2018.

Symposium: Dynamics of the whitefly vector associated with the cotton leaf curl outbreak. 2nd Sino-Pak International Conference on Innovations in Cotton Breeding and Biotechnology, Multan, Pakistan Nov 26-27, 2018.

2019

National

Seminar: Interactions and mechanisms involved in the systemic infection of the psyllid host by *Liberibacter*. Department of Plant Pathology, Louisiana State University, Baton Rouge, LA. February 3, 2019.

Seminar: Status of Cotton leaf roll dwarf virus genome sequencing in the US, and Cotton leaf curl virus complex in Pakistan. Cotton Inc. Raleigh, NC. Feb. 20, 2019.

Symposium: New Developments in Taxonomy of Plant Viruses, National Plant Diagnostics Network, Fifth National Meeting Indianapolis, IN. April 15-18, 2019.

Industry presentation: Psyllid-CLso/CLas cellular and organ-level interactions transcriptome-identified dsRNA targets, Florida Citrus Research Board, Ft Meyers, FL. April 22, 2019.

Psyllid-*Ca.Liberibacter* interactions involved in the circulative, propagative transmission pathway: molecular and cellular interfaces. Joint International Citrus Virology Conference and International Research Citrus Workshop-HLB, Riverside CA March 10-15, 2019.

Invited seminar: Biopesticidal dsRNA therapy for psyllid mortality and abatement of vector-mediated CLas transmission. University of Southern Mississippi, Hattiesburg, MS. Sept 27, 2019.

International

Plenary: Functional genomics of whitefly vector-begomovirus interactions; APS-Caribbean Division and 50th Anniversary, CENSA III International Seminar on Animal and Plant Health (SISA), Varadero, Cuba. May 6-10, 2019.

Workshop. Toward sustainable cacao production in Western Africa: High throughput phenotyping and -omics tools to study cacao diseases. (i) Cacao swollen shoot virus status in West Africa; (ii) Development and optimization of molecular detection platforms for CSSD. Sierra Leone Agricultural Research Institute, Kenema, Sierra Leone, May 25, 27, 2019.

Workshop: Cacao swollen shoot virus: update on CSSV research on viral genomic diversity and molecular detection platforms. Cacao Working Group, Accra, Ghana. October 21-22, 2019.

2022

Invited: Early-warning molecular surveillance of TYLCV new isolates: potential exotic, resistance-breaking betasatellite association and reported seed transmission. ASTA Conference, San Diego, CA., Jan 28, 2022.

Plenary Joint APS-CD/SEB Entomol. Soc Am. The whitefly *Bemisia tabaci* cryptic species group: contributions from the Caribbean. San Juan, Puerto Rico. March 27-31, 2022.

Invited Symposium Speaker: Whiteflies Symposium: Global status of the *Bemisia tabaci* cryptic species group. Joint ESA-Canadian Entomological Society meeting, Vancouver Canada Nov 13-16, 2022.

2023

National

Invited seminar: Emergent cacao badnavirus conundrum—‘introduced’ plant host and native viruses’ versus ‘co-evolved’ host-viral species. Plant Pathology Department, UC-Davis, May 1, 2023.

Invited presentation: Emergent Tomato yellow leaf curl virus-betasatellite complexes and other begomoviruses of the Solanaceae. World Seed Organization-ISHI Technical meeting. Atlanta, GA Oct 5-6, 2023.

International

Invited Symposium: International Plant and Animal Genome Conference, Cacao swollen shoot virus comprises multiple species. San Diego CA Jan 13-18, 2022.

Invited Symposium: Recent update on New World and West African cacao-infecting badnaviruses. Annual Research and Development Symposium-‘Improving Cocoa Productivity, Quality and Sustainability by Mitigating Risks’. Cocoa Research Centre, The University of West Indies, St. Augustine, Trinidad and Tobago. May 10, 2023.

Invited Symposium-Webinar. Geographical distribution and phylogenomic relationships of the cacao swollen shoot virus complex endemic to West Africa and cacao-badnaviruses in the Neotropics. Cocoa Annual Research and Development Symposium, Cocoa Research Centre, The University of West Indies, St. Augustine, Trinidad and Tobago. May 24-25, 2023.

Invited presentation: Sentinel plot surveillance of cotton leaf curl disease complex reveals geographical and temporal trends in predominant CSSD species and strains. ‘Cotton revival in Pakistan’. MNS University of Agriculture, Multan, Pakistan. June 19-20, 2023.

Popular and Outreach: [most relevant Total 7]

Butler, G.D., Jr., Henneberry, T. J., and Brown, J.K. Cotton leaf crumple disease of Pima cotton. University of Arizona: Tucson, 1985.

Butler, G.D., Jr.; Brown, J.K. Sweetpotato whitefly infection of cotton leaf crumple from weed hosts in 1984. University of Arizona: Tucson, 1985.

Britton, K., Tainter, F.F., and Brown, J.K. 2000. Plant Diseases on the Move. Pages 105-110 in: Biopollution: An Emerging Global Menace. K.O. Britton (ed). American Phytopathological Society Press, St Paul, MN. 114 pp.

Brown, J.K. 2001. Global diversity and distribution of whitefly-transmitted geminiviruses of cotton and malvaceous hosts. California, Arizona, and Texas Cotton Magazine. Western Agriculture Publishing Company.

Dennehy, T.J., B.A. DeGain, V.S. Harpold, Brown, J.K., Morin, S., J.A. Fabrick and Nichols, R.L. 2005. New challenges to management of whitefly resistance to insecticides in Arizona. University of Arizona Cooperative Extension, Vegetable Report. 31 pp. Series P-144. D. N. Byrne and P. Baciewicz, eds. <http://cals.arizona.edu/pubs/crops/az1382/index.html>.

Dennehy, T.J., DeGain, B.A., Harpold, V.S., Brown, J.K., Morin, S., Jeff A. Fabrick, J.A., Byrne, F.J., and Nichols, R.L. 2006. New whitefly biotype with high levels of resistance to insecticides. The University of Arizona - Cooperative Extension Report 32 pp. Series P-144. D. N. Byrne and P. Baciewicz, eds.

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Abstracts-Professional Meetings (chronological) [Total ~385] (not listed in this version).

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Brown, J.K. and Poulos, B.T. 1990. Semi-quantitative DNA hybridization analysis of whitefly-transmitted geminiviruses. *Phytopathology* 80:888.

Costa, H.S. and Brown, J.K. 1990. Variability in biological characteristics, isozyme patterns and virus transmission among populations of *Bemisia tabaci* (Genn.) in Arizona. *Phytopathology* 80:888.

Costa, H.S. and Brown, J.K. 1990. Variation in biological characteristics and isozyme patterns among populations of *Bemisia tabaci* in Arizona. Ent. Soc. America, New Orleans, December 2-6, 1990.

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Brown, J.K., Costa, H.S., and Bird, J. 1991. Variation in *Bemisia tabaci* populations based on geographic origin, silverleaf symptom induction, and esterase banding patterns. *Phytopathology* 81:1157.

- Brown, J.K., Lastra, R., and Bird, J. 1991. First documentation of whitefly-transmitted geminiviruses causing widespread disease in cotton, tobacco, and tomato in Dominican Republic and in tomato in Puerto Rico. *Fitopatologia* 26:47.
- Brown, J.K. and Poulos, B.T. 1991. Isolation of geminivirus DNA and demonstration of infectivity by biolistic bombardment of host plants. (Research Note) Annual Report of the Bean Improvement Cooperative 34:13-14.
- Brown, J.K. and Ryan, R. 1991. High velocity microprojectile mediated transmission of whitefly-transmitted geminivirus DNA or purified virions to intact plants. *Phytopathology* 81:1217.
- Bedford, I.D., Briddon, R.W., Markham, P.G., Brown, J.K., and Rosell, R.C. 1992. *Bemisia tabaci*: biotype characterization and the threat of this whitefly species to agriculture. Proc. 1992 Brighton Crop Protection Conference - Pests and Diseases 3:1235-1240.
- Brown, J.K., Poulos, B.T., and Bird, J. 1992. Differential detection of whitefly-transmitted geminiviruses in weed species from Puerto Rico by hybridization analysis with non-radioactive probes. APS-Caribbean Div. Meetings, Mayaguez, PR, May 1991.
- Brown, J.K. 1992. Biotypes of the sweetpotato whitefly: a current perspective. Pages 665-670 in: Proc. Beltwide Cotton Conferences: Cotton Insect Research and Control Conference. Nashville, TN. January 1992.
- Brown, J.K. and Coats, S.A. 1992. Examination of non-specific esterases as markers for populations and biotypes of *Bemisia tabaci*. presentation: Ent. Soc. America, Baltimore; Dec 6-10, 1992.
- Brown, J.K., Bird, J., Fletcher, D.C., Escudero, J., and Monllor, A. 1992. A new virus disease of passionvine (*Passiflora edulis* var *flavicarpa*) caused by a whitefly-transmitted geminivirus. *Fitopatologia* 27: 34.
- Brown, J.K., Coats, S., Bedford, I.D., Markham, P.G., and Bird, J. 1992. Biotypic characterization of *Bemisia tabaci* populations based on esterase profiles, DNA fingerprinting, virus transmission, and bioassay to key host plant species. *Phytopathology* 82:1104.
- Brown, J.K., Swanson, M.M., and Harrison, B.D. 1992. Comparison of genome affinities and epitope profiles of whitefly-transmitted geminiviruses. *Phytopathology* 82:1149.
- Coats, S.A., Hendrix, D.L. and Brown, J.K. 1992. Characterization of nonspecific esterases in the whitefly, *Bemisia tabaci*. Presentation Ent. Soc. Meetings, Baltimore. Dec 6-10, 1992 (presentation).
- Loniello, A.O., Martinez, R.T., Rojas, M.R., Gilbertson, R.L., Brown, J.K., and Maxwell, D.P. 1992. Molecular characterization of bean calico mosaic geminivirus. *Phytopathology* 82:1149.
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- Rosell, R., Lichty, J.E., and Brown, J.K. 1992. Morphological studies of *Bemisia tabaci* utilizing cryopreservation techniques. Ent. Soc. Meetings, Baltimore; Dec 6-10, 1992.
- Yokomi, R.K., Jimenez, D.R., Shapiro, J.P., Duffus, J.E., Brown, J.K., and Bird, J. 1992. A new biotype of *Bemisia tabaci*: interactions with plants and virus epidemiology. Page 297 in: Proc. XIX International Congress of Entomology, Beijing, China (June 28-July 4, 1992).
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- Fletcher, D., Brown, J.K., and Wilson, D. 1993. Biolistic inoculation to evaluate cotton breeding lines for resistance to cotton leaf crumple virus and a whitefly-transmitted geminivirus affecting cotton in Guatemala. *Phytopathology* 83:691.
- Idris, A.M., Fletcher, D.C. and Brown, J.K. 1993. Identification and partial characterization of Sinaloa tomato leaf curl virus (STLCV), a new whitefly-transmitted geminivirus affecting tomato and pepper from Sinaloa, Mexico. *Phytopathology* 83:692.
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- Banks, G. K., Sosa, M., Bird, J., and Brown, J.K. 1995. Molecular analysis of coat protein sequences of whitefly-transmitted geminiviruses from the Caribbean Basin. *Phytopathology* 85: 1212.
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- Zia-Ur-Rehman, M., Haider, M.S., and Brown, J.K. 2013. Hollyhock, a new reservoir of a monopartite begomovirus-satellite complex infectious to cotton plants. 12th International Plant Virus Epidemiology Symposium. January 28 to February 1, 2013. Ngurdoto Mountain Lodge, Arusha, Tanzania.
- Zia-Ur-Rehman, M., Hameeda, U., Haider, M.S., Herrmann, H.W., and Brown, J.K. 2013. Cotton leaf curl virus invading new hosts in Pakistan. 7th International Geminivirus Symposium and 5th International ssDNA Comparative Virology Workshop. Hangzhou, China November 3-9, 2013.
- Zia-Ur-Rehman, M., Haider, M.S., and Brown, J.K. Hollyhock, a new reservoir of a monopartite begomovirus-statellite complex infectious to cotton plants. PP-070. 12th International Plant Virus Epidemiology Symposium. January 28 to February 1, 2013. Ngurdoto Mountain Lodge, Arusha, Tanzania (Poster).

2014

- Al-Saleh, M., Brown, J.K., and Idris, A.M. 2014. Deep sequencing reveals *Cotton leaf curl Gezira* helper virus and sub-viral DNAs in weed, ornamental, and cultivated crops throughout Arabia. APS-CPS Joint Meeting, Minneapolis, MN. August 9-13, 2014.
- Al-Saleh, M., Brown, J.K., and Idris, A.M. 2014. Two begomoviral species causing yellow leaf curl disease of tomato: distinct spatial distribution patterns in the Arabian Peninsula. APS-CPS Joint Meeting, Minneapolis, MN. August 9-13, 2014.
- Avelar, A.S., and Brown, J.K. 2014. Development and implementation of molecular diagnostic tools for detection and identification of sweet potato viruses. APS-CPS Joint Meeting, Minneapolis, MN. August 9-13, 2014.
- Brown, J.K. 2014. Mechanisms of begomovirus expansion inadvertent selection of resistance-breaking viruses in a center of extreme diversity. Plant Pathology Conference University of Punjab-Lahore May 22-May 25, 2014. (Plenary).
- Brown, J.K. and Fisher, T.W. 2014. Potato psyllid and Asian citrus psyllid acquisition patterns, in relation to gene expression profiles. APS-CPS Joint Meeting, Minneapolis, MN. August 9-13, 2014. (Poster).
- Brown, J.K. and Rodrigues, J.-C. 2014. Recovery Plan for *Cowpea mild mottle virus*, a seedborne carla-like virus. NPDRS meeting APS, Minneapolis-Saint Paul, MN. August 10, 2014.
- Brown, J.K. et al 2014. Begomovirus diversity, phylogeography, and population genetics in cultivated and uncultivated plant ecosystems in Pakistan. Biodiversity meeting, Indonesia. Crop Protection 10.1016/j.cropro.2013.11.003. Crop Protection 61:104 (oral presentation).
- Brown, J.K., Ur-Rehman, Z., Usman, M., and Haider, M.S. Begomovirus diversity, phylogeography, and population genetics in cultivated and uncultivated plant ecosystems in Pakistan. Cotton Genetics Conference, Wuhan, China Sept 25-28, 2014. (oral presentation, M. Usman).
- Chingandu, N., and Brown, J.K. 2014. Exploring the diversity of *Cacao swollen shoot virus* an emergent badnavirus of *Theobromus cacao* endemic in West Africa. Cacao Genome Workshop, Plant & Animal Genome XXII: The International conference on the status of plant and animal genome research. Town and Country Hotel, San Diego, CA. January 11-15, 2014. (oral presentation; abstract).
- Chingandu, N., and Brown, J.K. 2014. Genetic diversity studies and molecular diagnostics of Cacao swollen shoot virus (CSSV). APS Annual Meeting, Minneapolis-Saint Paul, MN. August 9-13, 2014.
- Fisher, T.W., and Brown, J.K., 2014. Transcriptomic and proteomic analysis of *Candidatus Liberibacter asiaticus* and solanacearum during psyllid infection and vector-mediated transmission. APS-CPS Joint Meeting, Minneapolis, MN. August 9-13, 2014. (oral presentation).
- Park, S-H., Kyndt, J., Acedo, M., Best, O., and Brown, J.K., 2014. Selection of a low-phosphate *Auxenochlorella protothecoides* mutant for biofuel production using adaptive evolution: RNA-Seq analysis to identify key changes in gene expression associated with a lower phosphate requirement. College of Agriculture and Life Sciences ABBB Poster Session, UA, Tucson, AZ.
- Park, S-H., Brown, J.K., and Steichen, S. 2014. Molecular diagnostics for monitoring algal cultivation systems, and case study of a pathogenic bacterium. DOE-RAFT meeting, University of Arizona, Tucson, AZ. February 17, 2014.
- Park, S-H., Kyndt, J., Acedo, M., Best, O., and Brown, J.K. 2014. RNA-Seq transcript expression profiling of low phosphate adaptation of *Auxenochlorella protothecoides* and for efficient biofuel production. College of Agriculture and Life Science Research-A Vision for Tomorrow Poster Forum, Student Union, UA, Tucson, AZ. November 10, 2014.
- Park, S-H., Kyndt, J., Acedo, M., Best, O., and Brown, J.K. 2014. RNA-Seq transcript expression profiling of low phosphate adaptation of *Auxenochlorella protothecoides* and for efficient biofuel production. 4th International Conference on Algal Biomass, Biofuels, and Bioproducts, Santa Fe Convention Center, Santa Fe, NM. June 15-18, 2014.
- Tahir, M. and Brown, J.K. 2013. Development and validation of cotton-infecting begomoviral induced cell death via a modified betasatellite containing the Cyt c gene. College of Agriculture and Life Science Research-A Vision for Tomorrow Poster Forum, Student Union, UA, Tucson, AZ. November 10, 2014.

Zia-Ur-Rehman, M, Hameed, U., Iqbal, M.J. Haider, M.S., and Brown, J.K. 2014. Use of RNAi for broad spectrum resistance in cotton and tomato against begomoviruses and their vector *Bemisia tabaci*. College of Agriculture and Life Science Research-A Vision for Tomorrow Poster Forum, Student Union, UA, Tucson, AZ. November 10, 2014.

2015

Al-Saleh, M., Zakri, M.A., Brown, J.K., and Idris, A.M. 2015. Unusually large alphasatellite associated with *Cotton leaf curl Gezira virus* infecting okra in Jazan, Saudi Arabia. America Phytopathological Meeting, Pasadena, CA Aug 1-15, 2015 (poster).

Brown, J.K. 2015. Cacao swollen shoot virus: a re-emergent, mealybug-transmitted virus spreading in West Africa. Cacao Genome Workshop Plant & Animal Genome XXIII: The International conference on the status of plant and animal genome research. Town and Country Hotel, San Diego, CA. January 10-14, 2015 (oral presentation).

Brown, J.K. 2015. Assessment of detection methods and the threat of *Candidatus Liberibacter* in seed and other propagative plant materials. APS Symposium presentation, Pasadena, CA Aug 1-5, 2015.

Brown, J.K. 2015. Identification and preliminary characterization of a cyanobacterial pathogen of *Chlorella* species in the University of Arizona ARID raceway. Invited speaker, CICY-Cancun, Quintana Roo, Mexico. December 7, 2015.

Brown, J.K., Rast, T.J., and Fisher, T.W. 2015. Transcriptomics, proteomics, and yeast-2-hybrid analyses reveal genes pathways important for *Candidatus Liberibacter* sp. circulative, propagative transmission. International Research Conference on HLB, Caribe Royale, Orlando, FL February 9-13, 2015 (oral presentation).

Brown, J.K. Zia-Ur-Rehman, M., Chingandu, N., T. N. Sreenivasan, N.T.N., Surujdeo-Maharaj, S., Gutierrez, O., Herrmann, H.-W., and Umaharan, P. 2015. A previously undescribed badnavirus genome sequence determined by Illumina sequencing from cacao trees showing virus-like symptoms in Trinidad. America Phytopathological Meeting, Pasadena, CA Aug 1-15, 2015 (poster).

Fisher, T.W., and Brown, J.K. 2015. Optimization of dsRNA knockdown assays to evaluate RNAi efficacy for gene silencing in the potato psyllid. International Research Conference on HLB, Caribe Royale, Orlando, FL February 9-13, 2015 (oral presentation).

Zakri, A.M., Al-Saleh M.A., Brown, J.K., and Idris, A.M. 2015. Novel recombinant betasatellite associated with vein thickening symptoms on okra plants in Saudi Arabia. Arab Society of Plant Protection meeting, August 24-27, 2015.

Zia-Ur-Rehman, M., Hameed, U., Herrmann, H-W. Iqbal, M.J., Haider, M.S., and Brown: J.K. 2015. Invasion of the dicot-infecting mastrevirus *Chickpea chlorotic dwarf virus* in solanaceous hosts in Pakistan. America Phytopathological Society, Annual meeting. Pasadena, CA Aug 1-15, 2015 (poster).

2016

Brown, J.K., Rast, T.J., Cicero, J.E., and Fisher, T.W. 2016. Proposed model for *Candidatus Liberibacter asiaticus* and solanacearum systemic invasion and multiplication in the psyllid host and vector. American Phytopathological Society, Tampa FL, July 28-Aug. 4, 2016.

Brown, J.K., Rast, T.J., and Fisher, T.W. 2016. Psyllid vector-Liberibacter interactions at cellular and molecular interfaces. Symposium: Biology, Ecology and Management of the Asian Citrus Psyllid *Diaphorina Citri*, Vector of Huanglongbing International Congress of Entomology (ICE). Orlando, FL. September 26, 2016.

2017

Avelar, S.A., Ilyas, M., and Brown, J.K. 2017. Molecular diagnostics for exotic leaf curl begomovirus-betasatellites undergoing diversification and expansion. America Phytopathological Society, Annual meeting. San Antonio, TX Aug 5-9, 2017 (oral).

Brown, J.K., T.J. Rast, J. Cicero, and T.W. Fisher. 2017. Psyllid vector-Liberibacter interactions at cellular and molecular interfaces. Fifth Intern'l Res. Conf. on HLB. March 14-17, 2017. Orlando, FL (oral).

- Chingandu, N., Gutierrez, O.A., and Brown, J.K. 2017. Three previously known species, and two newly described species, Cacao red vein virus and Cacao red vein-banding virus, are associated with cacao swollen shoot disease in West Africa. International Symposium on Cocoa Research, Lima, Peru (poster slam).
- Gang, D.R., H. Beyenal, A. Omsland, N. Killiny, S. Futch, and J.K. Brown. 2017. The *Ca. Liberibacter* culturing consortium (CLCC): Developing methods to culture *Ca. Liberibacter asiaticus* – a game change in HLB research. Fifth Intern'l Res. Conf. on HLB. March 13-17, 2017. Orlando, FL (oral).
- He, R., M. Willis, T.W. Fisher, C.A. Soderlund, K. Pelz-Stelinski, J.K. Brown, D.R. Gang. 2017. Impact of *Candidatus Liberibacter asiaticus* infection on Asian citrus psyllid transcriptome. Fifth Intern'l Res. Conf. on HLB. March 13-17, 2017. Orlando, FL (oral).
- Steichen, S.A., C.B. Brown, I. Liang, S. Attalah, E. Leichtenberg, O. Bertelsen, K. Ogden, and Brown, J.K. 2017. Real-time, quantitative detection of *Vampirovibrio chlorellavorus*, a bacterial pathogen of *Chlorella* biofuel species. Institute for Energy Solutions Kickoff, CAPLA West, The University of Arizona. January 9, 2017.
- Steichen, S.A., Brown, C., Liang, I., Attalah, A., Ogden, K., Brown, J.K. Real-time, quantitative detection and management of *Vampirovibrio chlorellavorus*, a bacterial pathogen of *Chlorella* biofuel species. 7th International Conference on Algal Biomass, Biofuels and Bioproducts, 18 - 21 June, 2017, Hyatt Regency, Miami, FL, USA
- Wang, X., R. He, J. Wang, A. Berim, J.-J. Park, T.W. Fisher, J.K. Brown, D. R. Gang. 2017. Combined UPLC-MS/MS and MALDI-MSI analyses identify metabolic differences between CLso-infected and uninfected psyllids. Fifth Intern'l Res. Conf. on HLB. March 14-17, 2017. Orlando, FL (oral).
- 2018**
- Hovde, B., Steichen, S.A., Corcoran, A., Brown, J.K., and Starkenburg, S. 2018. Assembly of three genomes of pathogenic bacteria from open algal production systems. 13th Annual Sequencing, Finishing, and Analysis in the Future (SFAF) Meeting 2018 (oral).
- Avelar, S., Ilyas, M., Schuch, U.K., and Brown, J.K. 2018. A previously undiscovered *Emaravirus* associated with witches broom symptoms in blue palo verde (*Parkinsonia florida*) trees in Arizona (poster). ICPP-APS, Boston MA. Aug 27-Sept 3, 2018 (poster).
- Chingandu, N., Osman A. O.A, Marelli, J.-P., and Brown, J.K. 2018. Infectivity of cloned cacao swollen shoot associated badnaviral genome in *Nicotiana benthamiana*. ICPP-APS, Boston MA. Aug 27-Sept 3, 2018 (poster).
- Brown, J.K. and Chingandu, N. The cacao swollen shoot disease complex in West Africa comprises at least seven divergent *Badnavirus* species. ICPP-APS, Boston MA. Aug 27-Sept 3, 2018 (poster).
- Paredes-Montero, J.R. and Brown JK. 2018. Environmental niche adaptation among the *Bemisia tabaci* phylogeographic clades (Hemiptera: Aleyrodidae). Proceedings of the annual meeting of the Entomological Society of America (EntSoc 2018). November 17-20, Vancouver, Canada (oral presentation).
- 2019**
- Brown, J.K., Avelar, S., Schrimsher, D., Connor, K., Jacobsen, A.L., and Lawrence, K. S. 2019. Identification of a *Cotton leafroll dwarf virus-like* polerovirus infecting cotton in Alabama during 2017-2018. National Cotton Council of America. Beltwide Cotton Conference, New Orleans, LA January 8-10, 2019. <https://ncc.confex.com/ncc/2019/webprogram/Paper18800.html>.
- Lawrence, K.S., Hagan, A., Sikora, E., Conner, K., Schrimsher, D., Jacobson, A.L., Koebernick, J., and Brown, J.K. 2019. Cotton leafroll dwarf-like polerovirus identification, symptomatology, and occurrence in Alabama. National Cotton Council of America. Beltwide Cotton Conference, New Orleans, LA January 8-10, 2019. <https://ncc.confex.com/ncc/2019/webprogram/Paper18906.html>.
- Kumagai, L. Negrete, M. Viglienzoni, J., Luque-Williams, M., Rodriguez, L., del Toro, M., Galindo, T., Xiang, Q., Brown, J., Guo, Y., Woods, P., Mohammed, I., Posis, K., Phan, L., Hornbaker, V., and Blomquist, C. 2019. Summary of HLB testing in California from 2008–2018 by California Department of Food and Agriculture. Joint International Citrus Virology Conference and International Research Citrus Workshop-HLB, Riverside CA March 10-15, 2019 (poster).

- Brown, J.K. and Steichen, S. 2019. Characterizing infections and host-pathogen interactions of *Chlorella* spp. by the predatory algal bacterial pathogen, *Vampirovibrio chlorellavorus*. Joint Genome Institute Showcase. San Francisco, CA. April 2-5, 2019 (poster).
- Gomez, M.A., Chingandu, N., Pham, J., Jones, J. Zhang, E., Cho, M-J. Brown, J.K., and Staskawicz, B.J. 2019. CRISPR/Cas9-mediated targeting of Cacao swollen shoot virus DNA. IS-MPMI XVIII Congress, Glasgow, Scotland. July 14-18, 2019 (poster)
- Ramos-Sobrinho, R., Chingandu, N., Osman A. O.A, Marelli, J.-P., and Brown, J.K. 2019. A complex of badnavirus species associated with cacao swollen shoot disease in West Africa: evidence for high genomic variability and interspecific recombination. American Phytopathological Society, Annual meeting, Cleveland, OH. Aug 2-7, 2019 (poster).
- Avelar, S., Ramos-Sobrinho, R., Conner, K., Lawrence, K., Nichols, R., and Brown, J.K. 2019. Full-length genome sequence of *Cotton leafroll dwarf virus*-infecting cotton in Alabama. APS Annual meeting, Cleveland, OH. Aug 2-7, 2019 (poster).
- Paredes, J. and Brown, J.K. 2019. The NUMTs in the nuclear genomes of *Bemisia tabaci* (Hemiptera: Aleyrodidae) and its implications for the demarcation of molecular species. Entomological Society of America, Annual meeting. St Louis, MO. Nov 17-20, 2019 (oral presentation).
- Brown, J.K. 2019. Genomic variability and evolutionary considerations of badnaviruses associated with cacao swollen shoot disease. International Advances in Plant Virology-2019, Rome, Italy. October 29-31, 2019 (oral presentation).

2020

- Brown, J.K. and Paredes-Montero, J.R. 2020. Nuclear ortholog and mtCOI sequence analyses resolve at least five cryptic species of the whitefly *Bemisia tabaci* (Genn.) - exploration of microclimate affiliations. Entomological Society of America Annual Meeting (remote), Nov 16-19, 2020 (Symposium presentation).
- Brown, J.K., and Ramos-Sobrinho, R. 2020. Genomic variability and evolutionary relationships of badnaviruses infecting cacao worldwide. Virology Africa February 10-14, 2020. (abstract; Keynote Presentation).
- Mosharrof Hossain, M., Brown, J.K., and Flynt, A.S. 2020. Exploiting a second mode of gene silencing in Hemiptera: RNAi triggered by piRNAs. Entomological Society of America Annual Meeting (remote), Nov 16-19, 2020 (short presentation).
- Puig, A.S., Brown, J.K., Ramos-Sobrinho, R., Keith, C.V., Goenaga, R., and Gutierrez, O.A. 2020. Diseases affecting *Theobroma cacao* in Puerto Rico's emerging cacao industry. American Phytopathological Society, Annual meeting (remote), Denver, CO. Aug 10-14, 2019 (poster).
- Saberi, E., Mondal H.M., Paredes-Montero, J.R., Brown, J.K., and Qureshi, J.A. 2020. Optimizing dsRNA concentration for gene silencing in Asian citrus psyllid *Diaphorina citri*. Entomological Society of America Annual Meeting (remote), Nov 16-19, 2020 (oral presentation).
- Saberi, E., Mondal, H. M., Paredes-Montero, J.R., Brown, J.K., and Qureshi, J.A. 2020. Oral delivery of dsRNA to Asian citrus psyllid, *Diaphorina citri*. Entomological Society of America Annual Meeting (remote), Nov 16-19, 2020 (poster).

2021

- Brown, J.K., and Paredes-Montero, J.R. Eight phylogeographic haplotype groups of the B mitotype of *Bemisia tabaci* are resolved by cytochrome oxidase I gene single nucleotide polymorphisms. Entomological Society of America-Denver, Oct 31-Nov 3, 2021 (presentation).
- Brown, J.K., Ramos-Sobrinho, R. Lawrence, K., Schrimsher, DW, Isakeit, T., and Alabi, O.J. 2021. Molecular characterization of eight *Cotton leafroll dwarf virus* complete genome sequences from cotton in Alabama, Florida, and Texas. APS-CD meeting. Corrientes, Argentina, Sept 21-24 2021.
- Brown, J.K., Ramos-Sobrinho, R. Lawrence, K., Schrimsher, DW, Isakeit, T., and Alabi, O.J. 2021. Molecular characterization of eight *Cotton leafroll dwarf virus* complete genome sequences from cotton in Alabama, Florida, and Texas. APS-CD meeting. Corrientes, Argentina, Sept 21-24 2021.

- Keith, C.V., Ramos-Sobrinho R, Marelli JP, Brown J.K. 2021. Infectivity of Cacao swollen shoot Ghana M virus (CSSGMV) cloned 1.2-mer in cacao plants by gene gun-and agro-inoculation (poster). Phytopathology. APS Annual Meeting (virtual).
- Ramos-Sobrinho R, Kouakou K, Kouadjo C, Ameyaw G, Bi AB, Keith, C.V., Diby L, Kouame C, Marelli JP, Brown JK. 2021. PCR detection of cacao swollen shoot viruses indicates the prevalence of Cacao swollen shoot Togo B virus in cacao fields in Cote d'Ivoire and Ghana (poster). Phytopathology. APS Annual Meeting (virtual).
- Mosharraf Mondal, M., Flynt, A.S., Brown, J.K. 2021. Characteristics of a piRNA loci to be used to trigger piRNA-induced gene silencing in hemiptera. Entomological Society of America-Denver, Oct 31-Nov 3, 2021 (presentation).
- Paredes-Montero, J.R. and Brown, J.K. 2021. Global phylogeography, niche modeling, and ecology of the *Bemisia tabaci* mitotypes resolve at least fourteen cryptic species. Entomological Society of America-Denver, Oct 31-Nov 3, 2021 (presentation).
- Saberi, E., Mondal, M.H., Paredes-Montero, J.R., Brown, J.K. and Qureshi, J.A. 2021. vATPase-A gene silencing through orally delivered dsRNA in Asian citrus psyllid, *Diaphorina citri*. Entomological Society of America. Virtual.
- 2022**
- Adegbola, R.O., Kitchen, N.T., Lawrence, K.S., Conner, K., Small, I., Zaccaron, M., Green, J., Akhtar, A., and Brown, J.K. 2022. Surveillance of cotton leafroll dwarf virus (CLRVD) in cotton growing regions of the United States using molecular diagnostics and phylogeny of ORF0 and ORF4 virus genes. Beltwide Cotton Conferences, January 4-6, 2022. San Antonio Marriot Rivercenter, San Antonio, TX.
- Brown, J.K. 2022. Global status of New World and West African cacao-infecting badnaviruses: re-emergence with a vengeance. Australian Plant Virology Workshop. December 5-9, 2022. Melbourne, Australia.
- Brown, J.K. 2022. Comparative genome analysis and virus-host coevolution of a New World badnavirus infecting cacao. Joint meeting of the Entomological Society of America-Southeastern Branch and APS-CD. March 25- March 31, 2022. San Juan, Puerto Rico.
- Brown, J.K. Molecular and genomic evidence for five extant *Bemisia tabaci* cryptic species. 2022. New and Emerging Issues with Whiteflies and Whitefly-transmitted Viruses Symposium. Entomological Soc. of America, November 13-16, 2022. Vancouver, B.C. Canada.
- Brown, J.K., and Adegbola, R.O. 2022. Phylogenetic and population analyses of cotton leafroll dwarf virus reveals extensive genomic variability and global sub-populations. 15th International Symposium of Plant Virus Epidemiology. Madrid, Spain June 5-8, 2022.
- Brown, J.K., Adegbola, R.O., Lawrence, K., and Alabi, O. 2022. Cotton leafroll dwarf virus isolates in the US comprise divergent subpopulations and harbor extensive genomic variability. Beltwide Cotton Conferences, January 4-6, 2022. San Antonio Marriot Rivercenter, San Antonio, TX.
- Brown, J.K., Fisher, T.W., Rast, T, Paredes-Montero, J.R., and Rastegar, M. 2022. Model for psyllid-“*Ca. Liberibacter*” systemic invasion-infection based on -omics, Y2H, TEM/SEM, and confocal microscopy-FISH analyses. Hemipteran-Plant Interactions Symposium Dec 2-5, 2022. Melbourne, Australia.
- Brown, J.K. and Martin, K. 2022. Plant Foes New and Old: Brief Updates on Emerging and Re-emerging Diseases: Cotton leaf roll dwarf virus. APS annual meeting, Aug 6-10, 2022. Pittsburgh, Pennsylvania.
- Brown, J.K., and Paredes-Montero, J.R. 2022 Global phylogeny of the *Bemisia tabaci* cryptic/sibling species complex and predicted ecological niche relationships. Joint meeting of the Entomological Society of America Southeastern Branch and APS-CD. March 25- March 31, San Juan, Puerto Rico.
- Iqbal, M.J., and Brown, J.K. 2022. Genomic characterization and phylodynamics of begomoviruses introduced into the Middle East and Pakistan from the Americas. International Symposium on ssDNA viruses. September 26-Oct 1, 2022 (oral presentation). Sete, Occitanie, France.
- Keith, C.V., Brown, J.K. 2022. Targeted enrichment sequencing of cotton-infecting begomoviruses allows characterization of intra-host viral Communities (oral presentation). Joint ESA-APS-CD Annual Meeting, San Juan, Puerto Rico. March 25-31, 2022.

- Keith, C. V., Iqbal, J., Villegas, C., Alabi, O., Brown, J.K. 2022. Deep Surveillance of cotton-infecting begomoviruses by target enrichment and high-throughput sequencing. In: Proceedings of the 2022 Beltwide Cotton Conferences, January 4-6, 2022, San Antonio Marriott River Center. San Antonio, TX.
- Keith, C.V., Iqbal, J., and Brown, J.K. 2022. Target enrichment sequencing of begomoviruses (poster). International Symposium on ssDNA viruses. September 26-Oct 1, 2022. Sete, Occitanie, France.
- Keith, C.V, Racciato, N., Beilstein, M., Brown, J.K. 2022. A bioreporter for plant virus surveillance in crops (Poster). CROPPS Annual Meeting. October 9-11, 2022. Ithaca, NY.
- Marelli, J-P., Fabio, S., Schepens, I. Sobrinho, R.R., Brown, J.K., Kouadjo, C.G., Opoku, D., Kouakou, K., and Ameyaw, G. 2022. Development of an in-field detection kit for Cocoa Swollen Shoot Disease in Côte d'Ivoire and Ghana. International Symposium on Cocoa Research, December 4-7, 2022, Montpellier France.
- Paredes-Montero, J.R. and Brown, J.K. 2022. Eight phylogeographic haplotype groups of the B mitotype of *Bemisia tabaci* are resolved by cytochrome oxidase I gene single nucleotide polymorphisms. APS-CD/SEB San Juan PR March 25-31, 2022.
- Paredes-Montero, J.R. and Brown, J.K. 2022. Evolutionary biology of an invasive haplotype belonging to the *Bemisia tabaci* B mitotype. Proceedings of Joint meeting of the Entomological Society of America Southeastern Branch and APS-CD. March 25- March 31, 2022, San Juan, Puerto Rico.
- Flynt, A., Mondal, M., Zanaçanela, B., Gurung, A., Brown, J.K. 2022. Opportunities offered by piRNA mediated gene silencing in pest control. SysEB Evolution, Entomological Soc. of America, November 13-16, 2022. Vancouver, B.C. Canada.
- Saberi, E., M. Mondal, J. R. Paredes-Montero, J. K. Brown, J. A. Qureshi. 2022. RNAi associated knockdown of CHC, vATPase-A, and Snf7 genes and mortality for Asian citrus psyllid adults. Joint Annual Meeting of the Entomological Society of America and Entomological Society of Canada, 12-17 November 2022, Vancouver, BC, Canada.
- Saberi, E., M. Mondal, J. R. Paredes-Montero, J. K. Brown, J. A. Qureshi. 2022. Vacuolar ATPases gene targets of RNAi to control Asian citrus psyllid, *Diaphorina citri*. Annual Meeting of the Florida Entomological Society, 19-22 June 2022, Gainesville, Florida.
- Saberi, E., J. A. Qureshi, J. K. Brown, 2022. Quantitative gene expression analysis on targeted genes of “*Candidatus Liberibacter Solanacearum*” in the different developmental stages of potato psyllid *Bactericera cockerelli*. Annual Meeting of the Southeastern Branch of the Entomological Society of America, 26-30 March 2022, San Juan, PR.
- 2023**
- Adegbola, R., Keith, C.V., Maheepala D., and Brown, J.K. 2023. RNA enrichment, Illumina sequencing, and comparative sequence analysis of cotton leafroll dwarf virus (CLRDV) genomes from cotton samples collected in different U.S. states. Cotton Beltwide Annual Meeting. Jan 10-12, 2023. New Orleans, LA.
- Adegbola, Schuch, Brown. Paloverde emaravirus APS-Pacific Division. Tucson, Arizona. March 14-15, 2023.
- Brown, J.K. 2023. PAG Symposium: Plant and Animal Genome Conference, Cacao swollen shoot virus comprises multiple species. San Diego CA Jan 13-18, 2022.
- De Silva Weligodage, H., Iqbal, M. J., Maheepala, D.C., and Brown, J.K. 2023. Phylogenetic analysis of the *Cacao mild mosaic virus* movement protein gene sequence reveals extensive intraspecific divergence. APS-CD South Padre Island, TX. February 9-10, 2023.
- De Silva Weligodage, H., Iqbal, M.J., Maheepala Mudalige, D. and Brown, J.K. 2023. Phylogenetic analysis of Cacao mild mosaic virus (CaMMV) reveals extensive sequence divergence in the viral movement protein. American Phytopathological Society, Caribbean Division Meeting, South Padre Island, Texas, USA. February 9-10, 2023.
- Iqbal, M.J. and Brown, J.K. 2023. Phylogeography of two New World begomoviruses introduced into Pakistan and predicted native whitefly vector transmissibility. APS-CD South Padre Island, TX. February 7-11, 2023.

- Iqbal, M.J., Keith, C.V., and Brown, J.K. 2023. Emergence of Cacao-infecting badnaviral species in the Tropical Americas and West Africa. International congress of plant pathology, Lyon, France. August 20-25, 2023.
- Iqbal, M.J., W. Heshani De Silva and J. K. Brown. 2023. Webinar: Toward accurate, sensitive molecular detection of Cacao mild mosaic virus. Recent advances in the knowledge of cocoa viruses and detection techniques-Webinar to share updates on progress (on-line). Hosted by: University of Reading-International Cocoa Quarantine Centre (ICQC,R) and United States Department of Agriculture-ARS, Miami FL USA. April 28, 2023.
- Keith C V, Iqbal M J, Brown JK. 2023. Automated plant virus community pipeline for high-throughput viral genome assembly to facilitate pathogen surveillance in cotton-vegetable agroecosystems (oral presentation). Cotton Beltwide Annual Meeting. Jan 10-12, 2023. New Orleans, LA.
- Paredes-Montero, J. 2023. Knockdown of genes involved in the actin cytoskeleton pathway abates CLso accumulation in the potato psyllid. APS-CD South Padre Island, TX. February 9-10, 2023.

Declaration: We respectfully acknowledge the University of Arizona is on the land and territories of Indigenous peoples. Today, Arizona is home to 22 federally recognized tribes, with Tucson being home to the O'odham and the Yaqui. <https://www.arizona.edu/about#land-acknowledgement>