

# 46th Annual SOVE Conference



Albuquerque, New Mexico, USA  
September 27-October 1, 2015

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## SCIENTIFIC PROGRAM

46<sup>th</sup> ANNUAL CONFERENCE OF SOCIETY FOR VECTOR ECOLOGY  
ALBUQUERQUE, NEW MEXICO  
SEPTEMBER 27 – OCTOBER 1, 2015

### ***SUNDAY – SEPTEMBER 27, 2015***

2:00 – 6:00      **REGISTRATION**

4:00 – 5:30      **BOARD MEETING**  
**SANDIA MEETING ROOM #3**

**\*NO OTHER ACTIVITY\***

**\*FULL BREAKFAST IS COMPLIMENTARY EVERYDAY\***

### ***MONDAY – SEPTEMBER 28, 2015***

8:00 – 8:05      **WELCOME**  
**Michael Kaufman** [kaufma15@msu.edu](mailto:kaufma15@msu.edu)  
Vice President

8:05 – 8:10      **AWARD PRESENTATIONS**  
**Michael Kaufman** [kaufma15@msu.edu](mailto:kaufma15@msu.edu)  
Vice President  
**Bulent Alten** [kaynas@hacettepe.edu.tr](mailto:kaynas@hacettepe.edu.tr)  
President

8:10 – 8:15      **ANNOUNCEMENTS**  
**Major S. Dhillon** [mdhillon@northwestmvcd.org](mailto:mdhillon@northwestmvcd.org)  
Secretary-Treasurer

- 8:15 – 8:45      **PRESIDENTIAL ADDRESS**  
**Bulent Alten** [kaynas@hacettepe.edu.tr](mailto:kaynas@hacettepe.edu.tr)  
Hacettepe University, Turkey
- 8:45 – 9:20      **KEYNOTE SPEAKER**  
**Phil Lounibos** [lounibos@ufl.edu](mailto:lounibos@ufl.edu)  
Where vectors collide: Determinants of co-existence or exclusion in invasive mosquitoes
- 9:20 – 9:25      **WALTER LEAL** [wsleal@ucdavis.edu](mailto:wsleal@ucdavis.edu)  
International Congress of Entomology 2016
- 9:25 – 9:40      **REBECCA TROUT FRYXELL** [rfryxell@utk.edu](mailto:rfryxell@utk.edu)  
Ticks: ESA's tick IPM recommendations
- 9:40 – 9:55      **REPORTS FROM OVERSEAS SOVE REGIONS:**  
**EURO SOVE**  
Eva Veronesi [eva.veronesi@uzh.ch](mailto:eva.veronesi@uzh.ch)  
**BRAZILIAN SOVE**  
Paulo Pimenta [pimenta@cpqrr.fiocruz.br](mailto:pimenta@cpqrr.fiocruz.br)  
**ASIAN SOVE**  
Rui-De Xue [xueamcd@gmail.com](mailto:xueamcd@gmail.com)  
Qiyong Liu [liuqiyong@icdc.cn](mailto:liuqiyong@icdc.cn)
- 9:55 – 10:15      **BREAK**
- 10:15 – 12:15      **SYMPOSIUM 1: MODELING IN VECTOR ECOLOGY RESEARCH**  
**Moderator: Daniel E. Dawson** [dan.dawson@ttu.edu](mailto:dan.dawson@ttu.edu)  
The Institute of Environmental and Human Health,  
Texas Tech University, Lubbock, TX
- 10:15      Beyond forecasting: Modeling for decision support, policy, and translational research  
**Eric Lofgren** [lofgrene@vbi.vt.edu](mailto:lofgrene@vbi.vt.edu)  
Virginia Bioinformatics Institute, Virginia Tech University,  
Blacksburg, VA

- 10:30 Getting back to basics: The role of mechanistic models in identifying drivers of spatiotemporal variation in vector-borne disease transmission  
**Alex Perkins** [taperkins@nd.edu](mailto:taperkins@nd.edu)  
 Eck Institute for Global Health, University of Notre Dame, Notre Dame, IN
- 10:45 Modeling vector-borne pathogens: Issues of scale  
**Cynthia Lord** [clord@ufl.edu](mailto:clord@ufl.edu), B. W. Alto, C. R. Connelly, J. F. Day, J. J. Pohedra, S. L. Richards, C. T. Smartt and W. J. Tabachnick  
 Florida Medical Entomology Laboratory, University of Florida, Vero Beach, FL
- 11:00 SkeeterBuster, a detailed model of *Aedes aegypti* populations: Past, present, future  
**Christian Gunning** [cegunnin@ncsu.edu](mailto:cegunnin@ncsu.edu), K. Okamoto, E.C. Griffiths, A.L. Lloyd and F. Gould  
 North Carolina State University, Raleigh, NC
- 11:20 Why can't we still predict West Nile virus outbreak  
**Krisztian Magori** [kmagori@gmail.com](mailto:kmagori@gmail.com)  
 Eastern Washington University, Cheney, WA
- 11:35 A spatially-explicit population model for *Culex tarsalis* in the Southern High Plains built with the program R/Netlogo interface  
**Daniel E. Dawson** [dan.dawson@ttu.edu](mailto:dan.dawson@ttu.edu) and Christopher J. Salice  
 The Institute of Environmental and Human Health, Texas Tech University, Lubbock, TX
- 11:55 Predicting the introduction and transmission of Rift Valley Fever virus in the U.S.  
**Andrew Golnar** [agolnar@tamu.edu](mailto:agolnar@tamu.edu) and Gabe Hamer [ghamer@tamu.edu](mailto:ghamer@tamu.edu)  
 Texas A&M University, College Station, TX

12:15 – 1:30 **LUNCH**

1:30 – 3:15 **SYMPOSIUM 2: VECTOR-MICROBE INTERACTIONS**  
**Moderators: Dagne Duguma** [duguma@ufl.edu](mailto:duguma@ufl.edu)  
 Florida Medical Entomology Lab, University of Florida, Vero Beach, FL

**Michael Kaufman** [kaufma15@msu.edu](mailto:kaufma15@msu.edu)  
Michigan State University, East Lansing, MI

- 1:30 Effects of leaf condition on larvae-microbial interactions in water-filled tree holes  
**Beth Norman** [bcheever@msu.edu](mailto:bcheever@msu.edu)  
Michigan State University, East Lansing, MI
- 1:45 Unexpected discoveries from our tick microbiome projects  
**Rebecca Trout Fryxell** [rfryxell@utk.edu](mailto:rfryxell@utk.edu)  
Dept. of Entomology and Plant Pathology, University of Tennessee, Knoxville, TN
- 2:00 Changing ecology of tick-borne diseases in the Southern US: A new paradigm  
**Charles Apperson** [apperson@ncsu.edu](mailto:apperson@ncsu.edu), M. Kakumanu, L. Ponnusamy, H. Sutton, W. L. Nicholson, and S. R. Meshnick  
North Carolina State University, Raleigh, NC
- 2:15 Improving mosquito fitness through insulin signaling  
**Michael Riehle** [mriehle@ag.arizona.edu](mailto:mriehle@ag.arizona.edu)  
The University of Arizona, Tucson, AZ
- 2:30 Ecological interactions of larval mosquitoes and their control with microbiota in aquatic ecosystems  
**Dagne Dugma** [duguma@ufl.edu](mailto:duguma@ufl.edu), C. Wilson and W. E. Walton  
University of Florida/IFAS: Florida Medical Entomology Lab, Vero Beach, FL, Dept. of Soil and Water Sciences, Gainesville, FL;  
Dept. of Entomology, University of Calif. Riverside, CA
- 2:45 Friend-foe interactions: Do gut fungal and bacterial communities influence susceptibility of *Aedes* mosquitoes to La Crosse virus?  
**Ephantus Muturi** [emuturi2@illinois.edu](mailto:emuturi2@illinois.edu), Chang-Hyun Kim and Allison Hansen  
Illinois Natural History Survey, Champaign, IL
- 3:00 Ecological genomics view of the mosquito gut  
**Jiannong Xu** [jxu@nmsu.edu](mailto:jxu@nmsu.edu)  
New Mexico State University, Las Cruces, NM

3:15 – 3:45 **BREAK**

- 3:45 – 5:15      **SYMPOSIUM 3: INNOVATIONS IN VECTOR CONTROL**  
**Moderator: Stephen Dobson** [sdobson@uky.edu](mailto:sdobson@uky.edu)  
 Dept. of Entomology, Univ. of Kentucky, Lexington, KY
- 3:45      Innovation: An embarrassment of riches and nowhere to spend them  
**Dan Strickman** [dan.strickman@gatesfoundation.org](mailto:dan.strickman@gatesfoundation.org)  
 Global Health Program, Bill & Melinda Gates Foundation
- 4:00      Requirements and challenges faced by new vector control paradigms: A focus on spatial repellents  
**Nicole Achee** [nachee@nd.edu](mailto:nachee@nd.edu)  
 Eck Institute for Global Health, Dept. of Biological Sciences, University of Notre Dame, Notre Dame, IN
- 4:15      Combining IIT and SIT for a powerful and safe synergistic approach to mosquito suppression  
**Rosemary Susan Lees** [r.s.lees@iaea.org](mailto:r.s.lees@iaea.org), Dongjing Zhang, Jeremie RL Gilles and Kostas Bourtzis  
 Insect Pest Control Section, Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture, Seibersdorf, Austria
- 4:30      Impact of irradiation on vector competence for dengue and chikungunya viruses among *Aedes aegypti* and *Ae. albopictus* females  
**Eva Veronesi** [eva.veronesi@uzh.ch](mailto:eva.veronesi@uzh.ch), Fabrizio Balestrino, Alexander Mathis, Jeremie Gilles and Anna-Bella Failloux  
 University of Zurich Foundation, Switzerland; Institute Pasteur, France and International Atomic Energy, Austria
- 4:45      Effectiveness of autodissemination stations containing pyriproxyfen in reducing immature *Aedes albopictus* populations  
**Isik Unlu** [iunlu@mercercounty.org](mailto:iunlu@mercercounty.org), Devi S. Suman, Yi Wang, Kim Klingler, Nicholas Indelicato, Ary Faraji and Randy Gaugler  
 Center for Vector Biology, Rutgers University, New Brunswick, NJ; Mercer County Mosquito Control, West Trenton, NJ and Salt Lake City Mosquito Abatement Dist., Salt Lake City, UT
- 5:00      Autocidal methods against vectors - male mosquitoes as delivery vehicles  
**Stephen Dobson** [sdobson@uky.edu](mailto:sdobson@uky.edu), J. Mains, C. Brelsfoard

and H. Yamada

Dept. of Entomology, University of Kentucky, Lexington, KY

6:00 – 8:00      **RECEPTION: OCOTILLO ROOM**

## **TUESDAY – SEPTEMBER 29, 2015**

8:00 – 8:00      **FIELD ECOLOGY DAY:  
ACOMA PUEBLO AND PETROGLYPH NATIONAL  
MONUMENT  
LUNCH AT THE PUEBLO SITE: HOSTED  
DINNER AT EL PINTO RESTAURANT: HOSTED**

## **WEDNESDAY – SEPTEMBER 30, 2015**

8:00 – 10:00      **POSTER SESSION  
SANDIA MEETING ROOM #5**

**P-01:** The establishment and dispersal of *Aedes aegypti* in Clovis, California 2013-2015

**Jodi Holeman** [jholeman@mosquitobuzz.net](mailto:jholeman@mosquitobuzz.net), Consolidated Mosquito Abatement District, Selma, CA; K. Ramirez, C. Smith, and F.S. Mulligan

**P-02:** Nutrition and longevity in *Anopheles coluzzii*

**Roy Faiman** [roy.faiman@nih.gov](mailto:roy.faiman@nih.gov), Laboratory of Malaria and Vector Research, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Rockville, MD; D. L. Huestis, and T. Lehmann

**P-03:** Ecological succession of mosquitoes inhabiting waste trees in a subtropical swamp and upland forest in Tampa, Florida

**Emily Dinh** [emilydinh@health.usf.edu](mailto:emilydinh@health.usf.edu), University of South Florida, College of Public Health, Dept. of Global Health, Tampa, FL; and R. J. Novak



**P-04:** Spatial repellents and feeding deterrents selectively stimulate gustatory receptors in *Aedes aegypti* and *Anopheles quadrimaculatus*  
**Joseph C. Dickens** [joseph.dickens@ars.usda.gov](mailto:joseph.dickens@ars.usda.gov), Beltsville Agricultural Research Center, Beltsville, MD; and J. T. Sparks

**P-05:** Where the reviled things are: Habitat segregation of a diverse mosquito assemblage

**Kristen A. Hopperstad** [kahopper@ncsu.edu](mailto:kahopper@ncsu.edu), North Carolina State University, Dept. of Entomology, Raleigh, NC; M. Reiskind, R. H. Griffin, and M. S. Janairo

**P-06:** Mosquito species distribution in suburban, urban, and semi-rural residences in San Antonio, Texas

**Megan Wise de Valdez** [mwisedev@tamusa.tamus.edu](mailto:mwisedev@tamusa.tamus.edu), Texas A&M-San Antonio, Program of Biology, San Antonio, TX; J. Darden, and B. McGehee

**P-07:** Entomologic investigations of households associated with chikungunya virus positive case–patients in Puerto Rico

**Gilberto Felix** [ckn5@cdc.gov](mailto:ckn5@cdc.gov), Center for Disease Control and Prevention/NCEZID/DVBID/ Dengue Branch, San Juan, Puerto Rico; R. Barrera, K. Ryff, and R. Hemme

**P-08:** Fine-scale spatial epidemiology of avian malaria in grassland birds of North-Central Kansas

**Samantha A. Wisely** [wisely@ufl.edu](mailto:wisely@ufl.edu), University of Florida, Dept. of Wildlife Ecology and Conservation, Gainesville, FL; C. Ganser, B. Sandercock, and A. Gregory

**P-09:** Within-community variation in West Nile vector and virus activity in Northern Colorado

**Chester G. Moore** [chester.moore@colostate.edu](mailto:chester.moore@colostate.edu); Colorado State University, Dept. of Microbiology, Immunology and Pathology, Arthropod-borne and Infectious Diseases Laboratory, Fort Collins, CO; J. R. Fauver, R. Cornell, B. Andre, J. A. Schurich, and G. D. Ebel

**P-10:** Spatial and temporal distribution of chikungunya activity in the Americas

**Kenneth J. Linthicum** [kenneth.linthicum@ars.usda.gov](mailto:kenneth.linthicum@ars.usda.gov), USDA-ARS Center for Medical, Agricultural and Veterinary Entomology, Gainesville, FL; A. Anyamba, J. L. Small, R. Jepsen, S. C. Britch, J-P. Chretien, J.L. Sanchez, and C.J. Tucker

**P-11:** Exploring differential emergence of dengue in two cities with established *Aedes aegypti* populations: A case study in Sonora, Mexico

**Kathleen Walker** [krwalker@cals.arizona.edu](mailto:krwalker@cals.arizona.edu), University of Arizona, Dept. of Entomology, Tucson, AZ; K. Ernst, M. Riehle, and T. Joy

**P-12:** EMIRA - Wide scale application of *Bti* in an integrated malaria control program in Kossi, Burkina Faso

**Peter Dambach** [peter.dambach@web.de](mailto:peter.dambach@web.de), Institute of Public Health, Heidelberg University, Heidelberg, Germany; I. Traore, A. Kaiser, and N. Becker

**P-13:** Choice and efficacy bioassays evaluating attractive toxic sugar baits (ATSB) against *Culex tarsalis* and *Culex quinquefasciatus*

**Whitney A. Qualls** [w.qualls@med.miami.edu](mailto:w.qualls@med.miami.edu), University of Miami Miller School, Dept. of Public Health Sciences, Miami, FL; R-D Xue, and G. C. Muller

**P-14:** How do different microbial groups affect development and emergence of larval *Aedes triseriatus*?

**Michael Kaufman** [kaufma15@msu.edu](mailto:kaufma15@msu.edu), Michigan State University, Dept. of Entomology, East Lansing, MI; M. Baker, and E. Walker

**P-15:** Field evaluation of pyriproxyfen against mosquitoes in man-made structures in southern California

**Lal S. Mian** [lmian@csusb.edu](mailto:lmian@csusb.edu), Dept. of Health Science and Human Ecology, California State University, San Bernardino, CA; and M.S. Dhillon

**P-16:** Cross resistance in methoprene-resistant *Culex quinquefasciatus* (Diptera: Culicidae)

**T. Steven Su** [tsu@wvmvcd.org](mailto:tsu@wvmvcd.org), West Valley Mosquito and Vector Control District, Ontario, CA; M. L. Cheng, and J. Thieme

**P-17:** Tropical pyrethroid resistance and blood-feeding behavior in Puerto Rican *Aedes aegypti* and African *Anopheles gambiae*

**Natasha M. Agramonte** [nme@ufl.edu](mailto:nme@ufl.edu), University of Florida, Emerging Pathogens Institute, Dept. of Entomology, Gainesville, FL; A. D. Gross, D. R. Swale, J. R. Bloomquist, and U. R. Bernier

**P-18:** P-Impact of autocidal gravid traps (Ago) on the genetic structure of *Aedes aegypti* in southern Puerto Rico

**Ryan R. Hemme** [wma0@cdc.gov](mailto:wma0@cdc.gov), Center for Disease Control and Prevention/NCEZID/DVBID/ Dengue Branch, San Juan, Puerto Rico; G. Felix, B. White, and R. Barrera

**P-19:** *Sabadilla* versus *Pyrethroids*: A comparative study of toxicity and mosquitocidal modes of action

**Lacey J. Jenson** [ljenson@vt.edu](mailto:ljenson@vt.edu), Virginia Polytechnic Institute and State University, Blacksburg, VA; and T. D. Anderson

**P-20:** Local evolution of pyrethroid resistance offsets gene flow among *Aedes aegypti* collections in Yucatan, Mexico

**Karla Saavedra-Rodriguez** [Karla.Saavedra\\_Rodriguez@colostate.edu](mailto:Karla.Saavedra_Rodriguez@colostate.edu), Dept. of Microbiology, Immunology and Pathology, Colorado State University, Fort Collins, CO; M. Beaty, S. Denham, B. Beaty, L. Eisen, and W. C. Black IV

**P-21:** Treating cattle for mosquito and sandfly control

**Saul Lozano-Fuentes** [saul@genesislabs.com](mailto:saul@genesislabs.com), Genesis Laboratories, Wellington, CO; R. Poche, D. Poche, L. Polyakova, D. Burress, T. Barresi, R. Garlapati, M. I. Singh, and S. Samantaray

**P-22:** Abundance and diversity of black fly (Simuliidae) in San Gabriel Valley: Los Angeles County, CA

**Kimberly Nelson** [knelson@sgvmosquito.org](mailto:knelson@sgvmosquito.org), San Gabriel Valley Mosquito and Vector Control District, West Covina, CA; J. W. Wekesa, K. Fujioka, and SGVMVCD Staff

**P-23:** Examining short-range dispersal behaviors of house flies (Diptera: Muscidae)

**Alec Gerry** [alec.gerry@ucr.edu](mailto:alec.gerry@ucr.edu), University of California Riverside, Riverside, CA; and L. Zahn

**P-24:** Expansion of the Lyme disease vector, *Ixodes scapularis* and emergence of its associated pathogens in Adirondack Park, New York

**Brian Leydet** [bleydet@trudeauinstitute.org](mailto:bleydet@trudeauinstitute.org), Trudeau Institute, Saranac, NY; S. Lanthier, B. Elmore, K. Fantone, C. Naccari, M. Toth, M. Prusinski, L. Meehan, B. Backenson, and T. Sellati

**P-25:** Preliminary investigations into the ecology of spotted fever group *rickettsiae* in Northwest Georgia, USA

**Audrey E. Osterbind** [aeosterbind@gmail.com](mailto:aeosterbind@gmail.com); [yvf9@cdc.gov](mailto:yvf9@cdc.gov),

**Bryan N. Ayres** [ylt9@cdc.gov](mailto:ylt9@cdc.gov), Centers for Disease Control and Prevention, Atlanta, GA; J. L. Perniciano, and W. L. Nicholson

**P-26:** Shared ticks and tick-borne pathogens of cattle and wildlife in south central Florida

**Mary M. Merrill** [mleighmorris@ufl.edu](mailto:mleighmorris@ufl.edu), University of Florida, Wildlife Ecology and Conservation, Gainesville, FL; K. A. Saylor, R. K. Boughton, C. C. Lord, and S. M. Wisely

**P-27:** Rickettsial organisms found in ticks parasitizing the endangered Florida grasshopper sparrow (*Ammodramus savannanum*)

**Katherine Saylor** [saylorerk@ufl.edu](mailto:saylorerk@ufl.edu), University of Florida, Dept. of Wildlife Ecology and Conservation, Gainesville, FL; E. Ragheb, K. Miller, and S. Wisely

**P-28:** Can subclinical infestation by *Dermacentor andersoni* induce resistance to paralysis in sheep?

**Timothy J. Lysyk** [timlysyk@gmail.com](mailto:timlysyk@gmail.com), Lethbridge Research Centre, Agriculture and Agri-Food Canada, Lethbridge, AB; and S. J. Dergousoff

**P-29:** Neural Kir Channels: A critical conductance pathway in insect nervous systems

**Daniel R. Swale** [dswale@agcenter.lsu.edu](mailto:dswale@agcenter.lsu.edu), Louisiana State University, Dept. of Entomology, Baton Rouge, LA

**P-30:** Regional vector surveillance center for climate change (Chonbuk) 2014 – 2015

**Jong-Jin Lee** [jjlee@jbnu.ac.kr](mailto:jjlee@jbnu.ac.kr), Chonbuk National University, Dept. of Agricultural Biology, Chonbuk, South Korea; B.-S. Park, J.-S. Yoo, S.-J. Lee, J.-S. Kim, H.-A So, and M.-A. Whang

10:00 – 12:00 **SYMPOSIUM 4: NEW APPROACHES TO CULICOIDES AND SAND FLY CONTROL**

**Moderators:** **Eva Veronesi** [eva.veronesi@uzh.ch](mailto:eva.veronesi@uzh.ch)

University of Zurich Foundation, Switzerland

**Bulent Alten** [kaynas@hacettepe.edu.tr](mailto:kaynas@hacettepe.edu.tr)

Hacettepe University, Turkey

10:00 *Culicoides* population control using insecticidal sugar baits

**Lee Cohnstaedt** [lee.cohnstaedt@ars.usda.gov](mailto:lee.cohnstaedt@ars.usda.gov)

Arthropod-Borne Animal Disease Research Unit, USDA-ARS-CGAHR, USA

10:25 Why do we need control measures for *Culicoides* biting midges when we have vaccines?

**Simon Carpenter** [simon.carpenter@pirbright.ac.uk](mailto:simon.carpenter@pirbright.ac.uk)

Head of National Capability/Entomology, Pirbright Institute, UK

- 10:50 Evaluation of the efficacy of OLYSET® plus in a village-based cohort study in the Cukurova, Turkey in an area of hyperendemic cutaneous leishmaniasis  
**Bulent Alten** [kaynas@hacettepe.edu.tr](mailto:kaynas@hacettepe.edu.tr), Yusuf Ozbel, Ozge Erisoz Kasap, Filiz Gunay, Mehmet Karakus, Sinan Kaynas, Gizem Oguz, Yasemen Sarikaya, and Mert Dogan  
Hacettepe University, Faculty of Science, Dept. of Biology, Ecology Division, HUESRL-VERG Lab, Beytepe, Ankara, Turkey; Ege University Faculty of Medicine Dept. of Parasitology, Bornova, Izmir, Turkey; Mehmet Akif University Faculty of Veterinary, Burdur, Turkey
- 11:15 Integrated vector management against sand fly populations associated with animal facilities  
**Alexandra Chaskopoulou** [achaskopoulou@ars-ebcl.org](mailto:achaskopoulou@ars-ebcl.org), J. Kashefi, S. Demir and P. Koehler  
USDA-ARS European Biological Control Lab, Thessaloniki, Greece; American Farm School, Perrotis College, Thessaloniki, Greece; Ege University, Dept. of Biology, Izmir, Turkey; University of Florida, Dept. of Entomology, Gainesville, FL
- 11:40 Control of sand flies using attractive toxic sugar baits  
**Whitney A. Qualls** [w.qualls@med.miami.edu](mailto:w.qualls@med.miami.edu), John C. Beier and Gunter C. Muller  
University of Miami, Miller School of Medicine, Miami, FL and Hebrew University, Israel

12:00 – 1:30 **LUNCH: HOSTED**

- 1:30 – 3:30 **SYMPOSIUM 5: STUDENT ORAL PRESENTATIONS**  
**Moderators: William Walton** [william.walton@ucr.edu](mailto:william.walton@ucr.edu)  
Dept. of Entomology, University of Calif. Riverside, Riverside, CA  
**Daniel Dawson** [dan.dawson@ttu.edu](mailto:dan.dawson@ttu.edu)  
The Institute of Environmental and Human Health, Texas Tech University, Lubbock, TX  
**Nathan McConnell** [nmcco001@ucr.edu](mailto:nmcco001@ucr.edu)  
Dept. of Entomology, University of Calif. Riverside, Riverside, CA

- 1:30 An epizootic of BTV and EHDV among cattle and penned white-tailed deer in the absence of the U.S. vector *Culicoides sonorensis*  
**Michael Becker** [mbecker@agcenter.lsu.edu](mailto:mbecker@agcenter.lsu.edu) and Lane Foil  
Louisiana State University, Baton Rouge, LA
- 1:45 Larval diet alters adult survival and human malaria parasite incubation period, significantly impacting accuracy of disease transmission predictions  
**Lillian Moller-Jacobs** [llmjacobs23@gmail.com](mailto:llmjacobs23@gmail.com) and Matthew Thomas  
Penn State University, State College, PA
- 2:00 *Ixodes scapularis* in North Dakota, an emerging vector population  
**Michael W. Dougherty** [michael.dougherty@my.und.edu](mailto:michael.dougherty@my.und.edu), Robert A. Gaultney, Nathan M. Russart, John F. Kryda, Catherine A. Brissette and Jefferson A. Vaughan  
Dept. of Biology, University of North Dakota, Grand Forks, ND
- 2:15 Effects of container size on competition between *Aedes* mosquito larvae  
**Peter Brabrant** [pjbraba@ilstu.edu](mailto:pjbraba@ilstu.edu) and Steven Juliano  
Illinois State University, Normal, IL
- 2:30 *Pseudomonas aeruginosa* in *Musca domestica* L.: Temporospatial examination of bacteria population dynamics and house fly antimicrobial responses  
**Mary Katherine Mills** [mm02463@ksu.edu](mailto:mm02463@ksu.edu), C. Joyner and D. Nayduch  
Kansas State University, Manhattan, KS
- 2:45 Using permethrin to reduce mosquito attack rate and improve health of nestling Barn Owls  
**Caroline Efstathion** [cefstathion@ufl.edu](mailto:cefstathion@ufl.edu) and William Kern  
University of Florida, Dept. of Entomology and Nematology, Gainesville, FL
- 3:00 Behavioral responses of *Culex tarsalis* to fish-associated infochemicals in wind tunnel bioassays  
**Adena M. Why** [awhy001@ucr.edu](mailto:awhy001@ucr.edu), Emerson Lacey, Ring Cardé and William Walton  
Dept. of Entomology, UC Riverside, Riverside, CA

- 3:15 Host specific response to DEET selection in *Anopheles coluzzi* and *Aedes aegypti*  
**James D. Ricci** [james.ricci@email.ucr.edu](mailto:james.ricci@email.ucr.edu) and Bradley J. White  
 Dept. of Entomology, UC Riverside, Riverside, CA
- 3:30 – 4:00 **BREAK**
- 4:00 – 5:30 **SYMPOSIUM 6: MOLECULAR GENETIC APPROACHES TO THE STUDY OF VECTOR POPULATION BIOLOGY**  
**Moderators: Greg Lanzaro** [gclanzaro@ucdavis.edu](mailto:gclanzaro@ucdavis.edu)  
 Vector Genetics Laboratory, Dept. of Pathology, Microbiology and Immunology, School of Veterinary Medicine, University of California, Davis, CA  
**Douglas Norris** [douglas.norris@jhu.edu](mailto:douglas.norris@jhu.edu)  
 Dept. of Molecular Microbiology and Immunology, Johns Hopkins Malaria Research Institute, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD
- 4:00 Adaptive introgression as a mechanism for the evolution of insecticide resistance in the *Anopheles gambiae* complex  
**Greg Lanzaro** [gclanzaro@ucdavis.edu](mailto:gclanzaro@ucdavis.edu), Yoosook Lee, Bradley J. Main and Travis C. Collier  
 Vector Genetics Laboratory, Dept. of Pathology, Microbiology and Immunology, School of Veterinary Medicine, University of California, Davis, CA
- 4:20 Molecular genetics and genomics for the study of vector populations  
**Filiz Gunay** [gunayf@gmail.com](mailto:gunayf@gmail.com)  
 Hacettepe University, Faculty of Science, Beytepe Ankara Turkey
- 4:40 Evidence for new subspecies of *Aedes aegypti* in Senegal, West Africa  
**William Black IV** [william.black@colostate.edu](mailto:william.black@colostate.edu), Laura B Dickson, Corey L. Rosenberg, Karen L. Fleming, Alexandra Caspary, Saul Lozano-Fuentes, Punita Juneja, Francis M. Jiggins and Massamba Sylla

Dept. of Microbiology, Immunology and Pathology, Colorado State University, Fort Collins, CO; Dept. of Genetics, University of Cambridge, Cambridge, UK

5:00 A genetic approach to understanding human host choice in *Anopheles gambiae*

**Michel Slotman** [maslotman@ag.tamu.edu](mailto:maslotman@ag.tamu.edu), Giri Athrey, Luciano Cosme and Willem Takken  
Dept. of Entomology, Texas A&M University, College Station TX; Laboratory of Entomology, Wageningen University, Wageningen, The Netherlands

5:15 A molecular genetics looking glass: insight to the mysteries of malaria transmission complexity

**Douglas E. Norris** [douglas.norris@jhu.edu](mailto:douglas.norris@jhu.edu), Smita Das, Christine Jones, Mbanga Muleba, Jennifer C. Stevenson and the Southern Africa ICEMR Team  
Dept. of Molecular Microbiology and Immunology, Johns Hopkins Malaria Research Institute, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD; PATH, Diagnostics, Seattle, WA; Tropical Disease Research Centre, Ndola, Zambia and Macha Research Trust, Choma, Zambia

5:30 **BUSINESS MEETING:**

**Bulent Alten** [kaynas@hacettepe.edu.tr](mailto:kaynas@hacettepe.edu.tr)

President

**Major S. Dhillon** [mdhillon@northwestmvcd.org](mailto:mdhillon@northwestmvcd.org)

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## **THURSDAY – OCTOBER 1, 2015**

8:00 – 10:10 **SYMPOSIUM 7: FLIES AS VECTORS OF DISEASE**

**Moderators: Jerry Hogsette** [jerry.hogsette@ars.usda.gov](mailto:jerry.hogsette@ars.usda.gov)  
USDA-ARS-CMAVE, Gainesville, FL



- 8:00 Why flies are good vectors  
**Jerry Hogsette** [jerry.hogsette@ars.usda.gov](mailto:jerry.hogsette@ars.usda.gov)  
 USDA-ARS-CMAVE, Gainesville, FL
- 8:10 House flies as potential mechanical vectors of animal pathogens  
**Alec Gerry** [alec.gerry@ucr.edu](mailto:alec.gerry@ucr.edu)  
 Dept. of Entomology, University of California, Riverside, CA
- 8:30 Flourishing in filth: Fly-microbe interactions across life history  
**Dana Nayduch** [dana.nayduch@ars.usda.gov](mailto:dana.nayduch@ars.usda.gov)  
 USDA-ARS, Center for Grain and Animal Health Research,  
 Manhattan, KS
- 8:50 Differential transmission of food-borne bacteria to leafy greens  
 by blow flies and house flies  
**Astri Wayadande** [a.wayadande@okstate.edu](mailto:a.wayadande@okstate.edu)  
 Dept. of Entomology, Agricultural Plant Science, Oklahoma State  
 University, Stillwater, OK
- 9:10 Do horn flies and stable flies have a role in the transmission of  
 bacterial pathogens?  
**Pia Olafson** [pia.olafson@ars.usda.gov](mailto:pia.olafson@ars.usda.gov)  
 USDA-ARS, US Livestock Insects Research Laboratory,  
 Kerrville, TX
- 9:30 Transmission by calliphorids  
**Sonja Swiger** [slsruiger@ag.tamu.edu](mailto:slsruiger@ag.tamu.edu)  
 Texas A&M AgriLife Extension Service, Stephenville, TX
- 9:50 Tabanid mechanical transmission of pathogens and  
 comparison of vector potential to other flies and iatrogenic  
 vehicles  
**Lane Foil** [lfoil@agcenter.lsu.edu](mailto:lfoil@agcenter.lsu.edu)  
 Louisiana State University, Baton Rouge, LA
- 10:10 – 10:30 **BREAK**
- 10:30 – 12:15 **SYMPOSIUM 8: DEVELOPMENT OF REPELLENTS AND  
 INSECTICIDES FOR MOSQUITOES**  
**Moderator: Ulrich R. Bernier** [uli.bernier@ars.usda.gov](mailto:uli.bernier@ars.usda.gov)  
 Center for Medical, Agricultural, and Veterinary  
 Entomology, USDA-ARS, Gainesville, FL

- 10:30 Mosquito ABC transporters: A pharmacological barrier to insecticide delivery  
**Troy D. Anderson** [anderst@vt.edu](mailto:anderst@vt.edu)  
Dept. of Entomology, Fralin Life Science Inst., Virginia Tech
- 10:45 Structure-activity and modeling of mosquito repellents  
**Ulrich R. Bernier** [uli.bernier@ars.usda.gov](mailto:uli.bernier@ars.usda.gov)  
Center for Medical, Agricultural, and Veterinary Entomology, USDA-ARS, Gainesville, FL
- 11:00 Impact of synergists on insecticide resistance in *Anopheles gambiae*  
**Jeffrey R. Bloomquist** [jbquist@epi.ufl.edu](mailto:jbquist@epi.ufl.edu)  
Dept. of Entomology and Nematology, Emerging Pathogens Institute, University of Florida, Gainesville, FL
- 11:15 A phytochemical approach to insect repellents  
**Joel R. Coats** [jcoats@iastate.edu](mailto:jcoats@iastate.edu)  
Dept. of Entomology, Iowa State University, Ames, IA
- 11:30 Utilizing recent progress in USDA Spatial Repellent Program  
**Daniel L. Kline** [dan.kline@ars.usda.gov](mailto:dan.kline@ars.usda.gov)  
USDA-ARS, Center for Medical, Agricultural and Veterinary Entomology
- 11:45 Laboratory and field evaluation of insect repellents against lone star ticks  
**Rui-De Xue** [xueamcd@gmail.com](mailto:xueamcd@gmail.com), Jodi M. Scott, Whitney Qualls, Ali Fulcher, John Henzler and Mustapha Debboun  
Anastasia Mosquito Control District, St. Augustine, FL and Harris County Mosquito Control, Houston, TX
- 12:00 An update on the incidence of dengue gaining strength in Saudi Arabia and current control approaches for its vector mosquito  
**Abdulaziz Dakhellah Meqbel Althbyani** [aalthbyani@ut.edu.sa](mailto:aalthbyani@ut.edu.sa)  
Dept. of Biology, Faculty of Science, University of Tabuk
- 12:15 **CLOSING OF THE CONFERENCE**  
**President Bulent Alten**



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September 2015

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