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**SCIENTIFIC PROGRAM**

**45<sup>th</sup> ANNUAL CONFERENCE OF SOCIETY FOR VECTOR ECOLOGY  
SAN ANTONIO, TEXAS  
SEPTEMBER 28 – OCTOBER 2, 2014**

***SUNDAY – SEPTEMBER 28, 2014***

2:00 – 6:00      **REGISTRATION**

4:00 – 5:30      **BOARD MEETING  
RENAISSANCE ROOM**

**\*NO OTHER ACTIVITY\***

***MONDAY – SEPTEMBER 29, 2014***

8:00 – 8:05      **WELCOME**

8:05 – 8:10      **AWARD PRESENTATIONS  
Daniel Kline and Douglas Norris**

8:10 – 8:15      **ANNOUNCEMENTS  
Major S. Dhillon**

8:15 – 8:45      **PRESIDENTIAL ADDRESS  
Douglas Norris**

8:45 – 9:20      **KEYNOTE SPEAKER  
Rough Riders against Vector-Borne Diseases  
Speaker: Theodore Roosevelt  
26<sup>th</sup> President of the United States**

- 9:20 – 9:35      **REPORTS FROM OVERSEAS SOVE REGIONS:**  
*EURO SOVE*  
*BRAZILIAN SOVE*  
*ASIAN SOVE*
- 9:35 – 10:00    **BREAK**
- 10:00 – 12:00   **SYMPOSIUM 1: FEATURED YOUNG STARS IN VECTOR ECOLOGY**  
**Moderators: Daniel L. Kline** [dan.kline@ars.usda.gov](mailto:dan.kline@ars.usda.gov)  
Center for Medical, Agricultural, and Veterinary Entomology, USDA-ARS, Gainesville, FL
- 10:00    The sensory ecology of frog-biting midges, acoustically oriented vectors of anuran diseases  
**Ximena Bernal** [xbernal@purdue.edu](mailto:xbernal@purdue.edu)  
Dept of Biological Sciences, Purdue Univ, W. Lafayette, IN; USA  
Smithsonian Tropical Research Inst., Balboa, Republic of Panama
- 10:40    Vector Ecology in Tennessee: From molecule to ecosystem  
**Rebecca Trout Fryxell** [rfryxell@utk.edu](mailto:rfryxell@utk.edu); [rttrout@gmail.com](mailto:rttrout@gmail.com)  
Univ of Tennessee, Institute of Agriculture, TN
- 11:20    *Culicoides* dispersal: predicting arbovirus incursion and spread  
**Christopher Sanders** [christopher.sanders@pirbright.ac.uk](mailto:christopher.sanders@pirbright.ac.uk)  
Entomology Group, Vector-borne Viral Diseases programme, The Pirbright Institute, Woking, Surrey, UK
- 12:00 – 1:30    **LUNCH**
- 1:30 – 3:30      **SYMPOSIUM 2: STUDIES OF THE CHEMICALS AND PROCESSES THAT MITIGATE VECTOR-HOST CONTACT**  
**Moderators: 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
- 1:30    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 Institute, Virginia Tech, Blacksburg, VA
- 1:50 Novel mosquito repellents and insecticides  
**Ulrich R. Bernier** [uli.bernier@ars.usda.gov](mailto:uli.bernier@ars.usda.gov), Maia Tsikolia and Natasha M. Agramonte  
Center for Medical, Agricultural, and Veterinary Entomology, USDA-ARS, Gainesville, FL; Emerging Pathogens Institute, Dept of Entomology and Nematology, Univ of Florida, Gainesville, FL
- 2:15 Anticholinesterase action of insecticides and repellents  
**Jeffrey R. Bloomquist** [jbquist@epi.ufl.edu](mailto:jbquist@epi.ufl.edu)  
Emerging Pathogens Institute, Dept of Entomology and Nematology, Univ of Florida, Gainesville, FL
- 2:40 Utilizing nature's chemistry to repel insects and ticks  
**Joel R. Coats** [jcoats@iastate.edu](mailto:jcoats@iastate.edu)  
Dept of Entomology, Iowa State Univ, Ames, IA
- 3:05 Evaluation of power breeze with citronella oil against *Aedes albopictus*  
**Rui-de Xue** [xueamcd@gmail.com](mailto:xueamcd@gmail.com), Jodi Scott, Mike Smith and Alie Fulcher  
Anastasia Mosquito Control District, St. Augustine, FL
- 3:30 – 4:00 **BREAK**
- 4:00 – 6:10 **SYMPOSIUM 3: DoD ROUGH RIDERS OF THE VECTOR RANGE**  
**Moderators: LTC Jason H. Richardson** [jason.h.richardson.mil@mail.mil](mailto:jason.h.richardson.mil@mail.mil)  
Armed Forces Pest Management Board  
**Graham White** [graham.white@ars.usda.gov](mailto:graham.white@ars.usda.gov)  
Deployed Warfighter Protection Program
- 4:00 Military Entomology Research Overview  
**LTC Jason H. Richardson** [jason.h.richardson.mil@mail.mil](mailto:jason.h.richardson.mil@mail.mil)  
Armed Forces Pest Management Board
- 4:20 WRBU Tools for Biosurveillance: Interactive Keys, DNA Barcoding and VectorMap  
**Yvonne Linton** [linton.yvonne3@gmail.com](mailto:linton.yvonne3@gmail.com) and

**Doug Burkett** [douglas\\_burkett@yahoo.com](mailto:douglas_burkett@yahoo.com)

Walter Reed Biosystematics Unit, Walter Reed Army Institute of Research

4:50 Field studies of *Aedes aegypti* control in Thailand

**Alongkot Ponlawat** [alongkotp@afirms.org](mailto:alongkotp@afirms.org)

Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand

5:10 New application strategies

**Kenneth Linthicum** [kenneth.linthicum@ars.usda.gov](mailto:kenneth.linthicum@ars.usda.gov)

Center for Medical, Agricultural, and Veterinary Entomology, USDA-ARS, Gainesville, FL

5:30 NECE vector control activities

**CDR Peter Obenauer** [peter.obenauer@med.navy.mil](mailto:peter.obenauer@med.navy.mil)

Navy Entomology Center of Excellence, Jacksonville, FL

5:50 Sand fly control

**Graham White** [graham.white@ars.usda.gov](mailto:graham.white@ars.usda.gov)

Deployed Warfighter Protection Program

6:30 – 8:30      **RECEPTION**

## ***TUESDAY – SEPTEMBER 30, 2014***

9:00 – 4:00

***ECOLOGICAL FIELD EXCURSION:***

***NATURAL BRIDGE CAVERNS AND MISSION SAN JOSE***

***Box Lunch Included***

6:00 – 8:00

***DINNER AT THE HARD ROCK CAFÉ: HOSTED***

## ***WEDNESDAY – OCTOBER 1, 2014***

8:00 – 10:00

***CONTINENTAL BREAKFAST & POSTER SESSION: HOSTED***

**P1:** Instantaneous internet-based submission of biosurveillance data

**Luke Mitchell** [lukemitchell315@gmail.com](mailto:lukemitchell315@gmail.com), Walter Reed Biosystematics Unit, Museum Support Center, Smithsonian Institution, Suitland, MD; B. Alten, K. Ergunay, N. Hijjawi, J. Richardson, and Y-M. Linton

**P2:** VectorMap: An online repository for biosurveillance data and risk assessment tools

**David Pecor** [pecord@si.edu](mailto:pecord@si.edu), Walter Reed Biosystematics Unit, Museum Support Center, Smithsonian Institution, Suitland, MD; D. Murkett, D. Foley, and J. Richardson

**P3:** Incriminating a dengue virus vector by mean of antibody response to mosquito saliva

**Ryan R Hemme** [wma0@cdc.gov](mailto:wma0@cdc.gov), Centers for Disease Control and Prevention, Dengue Branch, San Juan, PR; E. Hunsperger, and R. Barrera

**P4:** Standard methods underestimate foraging behavior of vectors

**Douglas Norris** [douglas.norris@jhu.edu](mailto:douglas.norris@jhu.edu), Smita Das, T. Henning, and J. Stevenson, The W. Harry Feinstone Dept of Molecular Microbiology and Immunology, The Johns Hopkins Malaria Research Institute, Johns Hopkins Univ, Bloomberg School of Public Health, Baltimore, MD

**P5:** Olfaction genes expression in *Aedes aegypti* in relation to host seeking

**Luciano Cosme** [cosme@tamu.edu](mailto:cosme@tamu.edu), Dept of Entomology, Texas A & M Univ, College Station, TX; C. Coates, and M. Slotman

**P6:** The use of CDC autocidal gravid oviposition traps to control *Aedes aegypti* in an urban residential community in Clovis, CA

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

**P7:** The effect of botanical extracts on ovipositing *Aedes aegypti*

**William H. Dees** [wdees@mcneese.edu](mailto:wdees@mcneese.edu), Dept of Biology and Health Sciences, McNeese State Univ, Lake Charles, LA; J. Dupre, A. Richard, S. McMicken, C. Ardizzone, O. Christian, C. Richmond, J. Hightower, and J. Woolman

**P8:** The effect of botanical components on *Aedes aegypti*: An investigation of 17 plant species

**William H. Dees** [wdees@mcneese.edu](mailto:wdees@mcneese.edu), Dept of Biology and Health Sciences, McNeese State Univ, Lake Charles, LA; J. Theriot, K. Leonards, J. Byrne, C. Ardizzone, A. Richard, J. Dupre, T. Estrada, A. Fusilier, O. Christian, C. Richmond, J. Hightower, A. Daugereaux, S. Mopper, and J. Woolman

**P9:** Effectiveness of silicone-based monomolecular film (MMF) against *Aedes aegypti*

**Chutipong Sukkanon** [e\\_mc\\_square@hotmail.com](mailto:mc_square@hotmail.com), Dept of Parasitology and Community Health, Mahidol Univ, Nakhon Phatom, Thailand; R. Yaicharoen, C. Lamom, T. Chareonviriyaphap, and W. Ngren-Ngarm-Lert

**P10:** Evaluation of spatial repellent, irritant and toxic properties of plant essential oils against dengue vector *Aedes aegypti*

**Sunaiyana Sathantriphap** [sunaiyana@yahoo.com](mailto:sunaiyana@yahoo.com), Dept of Entomology, Faculty of Agriculture, Kasetsart Univ, Bangkok, Thailand; T. Chareonviriyaphap, N. Achee, and U. Sanguanpong

**P11:** A comparison of four anti-coagulants for developing of Bancroftian microfilaria infected in *Aedes aegypti*

**Jinrapa Phothikasikorn** [jinrapa.pho@mahidol.ac.th](mailto:jinrapa.pho@mahidol.ac.th), Dept of Microbiology, Faculty of Science, Mahidol Univ, Bangkok, Thailand; R. Boonplueang, W. Noonpakdee, and T. Chareonvirihaphap

**P12:** A comparison of field and laboratory tests of escape response in *Aedes aegypti* dengue mosquito

**Monthathip Kongmee** [fagrmtk@ku.ac.th](mailto:fagrmtk@ku.ac.th), Dept of Entomology, Faculty of Agriculture at Kamphaeng Saen Campus, Kasetsart Univ, Nakhon Pathom, Thailand; S. Santhantriphop, M. Bangs, and T. Chareonviriyaphap

**P13:** Population effects of sub-lethal malathion exposure to larvae of the yellow-fever mosquito, *Aedes aegypti*: influence of chemical concentration, temperature, and age at exposure

**Daniel Dawson** [dan.dawson@ttu.edu](mailto:dan.dawson@ttu.edu), Dept of Environmental Toxicology, The Institute of Environmental and Human Health, Texas Tech Univ, Lubbock, TX; S. Weir, A. Olson, and T. Bilbo

**P14:** Interaction of Dengue and Sindbis viruses in *Aedes albopictus* (Diptera: Culicidae)

**Ephantus Muturi** [ephajumu@yahoo.com](mailto:ephajumu@yahoo.com), Illinois Natural History Survey, Univ of Illinois, Champaign, IL; and J. Bara

**P15:** Activity patterns of *Aedes albopictus* within a diverse environment of residential and agricultural activity and introduction of a new lethal ovitrap for controlling wild vector populations in Thessaloniki, Greece, 2014

**Casey Parker** [caseyparker@ufl.edu](mailto:caseyparker@ufl.edu), Entomology & Nematology Dept, Univ of Florida, Gainesville, FL; A. Chaskopoulou, M. Fotakis, R. Pereira, and P. Koehler

**P16:** Current status of the Aedini subgenus *Protoculex* in the Continental United States

**Brian Byrd** [bdbyrd@wcu.edu](mailto:bdbyrd@wcu.edu), College of Health and Human Sciences, Western Carolina Univ, Cullowhee, NC; B. Harrison, D. Shroyer, and C. Sither

**P17:** Differential effects of sugar type on the longevity and fertility of *Anopheles dirus* adults in AFRIMS Laboratory

**Siriporn Phasomkusolsil** [siripornp@afirms.org](mailto:siripornp@afirms.org), Dept of Entomology, US Army Medical Component, Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand; A. Schuster, P. McCardle, K. Pantuwattana, J. Tawong, N. Monkanna, W. Khongtak, Y. Kertmanee, and S. Khaosanorh

**P18:** Species-specific chemosensory gene expression in the olfactory organs of the malaria vector, *Anopheles gambiae*

**Giridhar Athrey** [giri.athrey@tamu.edu](mailto:giri.athrey@tamu.edu), Dept of Entomology, Texas A & M Univ, College Station, TX; T. Hodg, L. Cosme, S. Pathikonda, W. Takken, and M. Slotman

**P19:** The scent of African malaria mosquito breeding sites: Odors influence but do not dictate oviposition decision making in *Anopheles gambiae* s.l.

**Dirk Schorkopf** [dirk.Louis.schorkopf@slu.se](mailto:dirk.Louis.schorkopf@slu.se), Dept of Plant Protection Biology, Alnarp, Sweden; E. Kweka, E. Elieza, L. Mboera, M. Shayo, A. Mafra-Neto, W. Takken, G. Birgersson, R. Ignell, and T. Dekker



**P20:** Genetic basis of insensitivity to DEET in *Anopheles gambiae*  
**James Ricci** [jricc001@ucr.edu](mailto:jricc001@ucr.edu), Dept of Entomology, Univ of Calif, Riverside, CA; D. Turissini, R. Gree, and B. White

**P21:** Field occurrence and laboratory selection of resistance to methoprene in *Culex quinquefasciatus* (Diptera: Culicidae)  
**Tianyun Su** [tsuu@wvmvcd.otg](mailto:tsuu@wvmvcd.otg), West Valley Mosquito and Vector Control Dist, Ontario, CA; M-L. Cheng and J. Thieme

**P22:** Influence of a mosquito control treatment on bacterial communities associated with *Culex tarsalis* larvae  
**Dagne Duguma** [duguma@ufl.edu](mailto:duguma@ufl.edu), Florida Medical Entomology Lab, Univ of Florida, Vero Beach, FL; M. Hall, P. Rugman-Jones, R. Stouthamer, J. Neufeld, and W. Walton

**P23:** Black fly (Simuliidae) surveillance in San Gabriel Valley, Los Angeles County, CA and mention of novel human pathogens  
**Kimberly Nelson** [Knelson@sgvmosquito.org](mailto:Knelson@sgvmosquito.org), San Gabriel Valley Mosquito and Vector Control Dist, Surveillance Dept, West Covina, CA; W. Wekesa and K. Fujioka

**P24:** Insecticidal sugar bait station for biting midges  
**Lee Cohnstaedt** [Lee.Cohnstaedt@ars.usda.gov](mailto:Lee.Cohnstaedt@ars.usda.gov), U.S. Dept of Agriculture - Agricultural Research Service, Manhattan, KS; and D. Snyder

**P25:** The use of systemic insecticides to control *Phlebotomus* spp. sand flies in Southern Kazakhstan  
**David Poche** [davidp@genesislabs.com](mailto:davidp@genesislabs.com), Genesis Laboratories, Wellington, CO; A. Gendernalik, L. Polyakova, R. Poché, M. Kozhahmetova, B. Aimakhanov, Z. Abdeliyev, and B. Atshabar

**P26:** Expression and biochemical properties of a recombinant acetylcholinesterase 1 of the sand fly, *Phlebotomus papatasi* (Scopoli) insensitive to organophosphate inhibition  
**Kevin Temeyer** [kevin.temeyer@ars.usda.gov](mailto:kevin.temeyer@ars.usda.gov), Agricultural Research Service, U.S. Dept of Agriculture, Kerrville, TX; A. Tuckow, J. Bloomquist, and A. Pérez de León

**P27:** Target-site insensitivity and metabolic detoxification mechanisms of insecticide resistance in *Phlebotomus papatasi* and *Lutzomyia longipalpis* sand flies (Diptera: Psychodidae)  
**Scott Bernhardt** [scott.bernhardt@usu.edu](mailto:scott.bernhardt@usu.edu), Dept of Biology,

Utah State Univ, Logan, UT; D. Denlinger, P. Lawyer, K. Saavedra-Rodriguez, S. Lozano-Fuentes, and W. Black IV  
**P28:** Local dispersal of *Salmonella* by *Alphitobius diaperinus*  
**Tawni Crippen** [tc.crippen@ars.usda.gov](mailto:tc.crippen@ars.usda.gov), Agricultural Research Service, U.S. Dept of Agriculture, College Station, TX; C. Sheffield and R. Beier

**P29:** A dynamic regression model to predict the number of larval *Amblyomma americanum* with environmental factors  
**Liza Mann** [enm4644@truman.edu](mailto:enm4644@truman.edu), Dept of Biology, Truman State Univ, Kirksville, MO; S. Fore, K. Mao, and H-J Kim

**P30:** Distribution and Abundance of *Dermacentor andersoni* and *D. variabilis* in Western Canada

**Shaun Dergousoff** [shaun.dergousoff@agr.gc.ca](mailto:shaun.dergousoff@agr.gc.ca), Lethbridge Research Centre, Agriculture and Agri-Food Canada, Lethbridge, Alberta, Canada; T. Lysyk, N. Chilton, and K. Rochon

**P31:** Plastron respiration and underwater survival in ixodid ticks  
**Laura Fielden** [lfielden@truman.edu](mailto:lfielden@truman.edu), Dept of Biology, Truman State Univ, Kirksville, MO; A. Belzer, A. Stoudacher, and D. Garth

**P32:** Evaluation of candidate repellents against *Leptotrombidium chiangraiensis* (Acari: Trombiculidae) chiggers, the vector of scrub typhus

**Surachai Leepitakrat** [surachail@afirms.org](mailto:surachail@afirms.org), Dept of Entomology, US Army Medical Component, Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand; T. Monkanna, O. Thachin, A. Ponlawat, P. McCardle, and A. Schuster

**P33:** A semi-field tent-tunnel for evaluation of mosquito trap attractants and spatial repellents

**A. Ponlawat** [alongkotp@afirms.org](mailto:alongkotp@afirms.org), George Peck, E. Lindroth, and R. Lowen, Walter Reed Army Institute of Research, Silver Spring, MD

**P34:** The unique, non-swarming mating behaviors of *Uranotaenia lowii*, a frog-biting mosquito

**Bianca Rendon** [bianca.rendon@ttu.edu](mailto:bianca.rendon@ttu.edu)  
Priyanka De Silva and Ximena Bernal, Dept. of Natural Resources, Texas Tech Univ, Texas

10:00 – 12:00 **SYMPOSIUM 4: HIGHER DIPTERA: FROM THE LABORATORY TO THE FIELD**

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

10:00 Horn Fly Genome Research

**Felix Guerrero** [felix.guerrero@ars.usda.gov](mailto:felix.guerrero@ars.usda.gov)

USDA-ARS-KBUSLIRL

10:20 Insights Into Stable Fly Olfaction

**Pia Untalan Olafson** [pia.olafson@ars.usda.gov](mailto:pia.olafson@ars.usda.gov)

USDA-ARS, KBUSLIRL

10:40 Screwworm Male Only Strain

**Steve Skoda** [steve.skoda@ars.usda.gov](mailto:steve.skoda@ars.usda.gov)

USDA-ARS, KBUSLIRL

11:00 Traps and Attractants Affect Stable Fly Behavior

**Jerry Hogsette** [jerry.hogsette@ars.usda.gov](mailto:jerry.hogsette@ars.usda.gov)

USDA-ARS-CMAVE, Gainesville, FL

11:20 Traps and Attractants Affect Tabanid Behavior

**Daniel L. Kline** [dan.kline@ars.usda.gov](mailto:dan.kline@ars.usda.gov)

Center for Medical, Agricultural, and Veterinary Entomology,  
USDA-ARS, Gainesville, FL

11:40 Parlance of Mosquito Systematics: From Classical to Molecular,  
A Long Journey

**Jagbir Singh Kirti** [prjagbir2005@gmail.com](mailto:prjagbir2005@gmail.com)

Punjabi Univ, Punjab, India

12:00 – 1:30 **LUNCH**

1:30 – 3:30 **SYMPOSIUM 5: STUDENT ORAL PRESENTATIONS**

**Moderators:** James Ricci [jricc001@ucr.edu](mailto:jricc001@ucr.edu)

**Francis Loko** [francis.loko@ttu.edu](mailto:francis.loko@ttu.edu) and

**Dan Dawson** [dan.dawson@ttu.edu](mailto:dan.dawson@ttu.edu)

Dept of Entomology, Univ of Calif, Riverside, CA;

Dept of Envir Toxicology, Texas Tech Univ, Lubbock, TX

- 1:30 Kissing bugs, citizen science, and Chagas disease: A comprehensive ecological research approach to studying the disease system in Texas and the southern U.S.  
**Rachel Curtis** [rcurtis@cvm.tamu.edu](mailto:rcurtis@cvm.tamu.edu), G. Hamer, E. Wozniak and S. Hamer  
 Dept of Veterinary Integrative Biosciences, College of Veterinary Medicine, Texas A&M Univ; Zoonosis Control Branch, Tx Dept of State Health Services; Dept of Entomology, College of Agriculture and Life Science
- 1:45 Anuran skin secretions, natural frog-biting midge repellents?  
**Bianca Rendon** [bianca.rendon@ttu.edu](mailto:bianca.rendon@ttu.edu) and Ximena E. Bernal  
 Dept of Natural Resources, Texas Tech Univ, Lubbock, TX  
 Dept of Biological Sciences, Purdue Univ, W. Lafayette, IN; USA  
 Smithsonian Tropical Research Inst., Balboa, Republic of Panama
- 2:00 Lyme Disease in Texas? Enhancing Prevention Through the Identification of Areas of Risk  
**Susan Swinson-Williams** [stw143@psu.edu](mailto:stw143@psu.edu)  
 Pennsylvania State Univ, University Park, PA
- 2:15 Evaluation of integrated vector management tools to halt the development of *Aedes aegypti* (Skuse) mosquito in a coastal town of Ecuador  
**Diana Naranjo** [dnaranjo@med.miami.edu](mailto:dnaranjo@med.miami.edu); Whitney Qualls [w.qualls@med.miami.edu](mailto:w.qualls@med.miami.edu), John Beier [jbeier@med.miami.edu](mailto:jbeier@med.miami.edu) and Hugo Jurado [dr\\_hugojurado@hotmail.com](mailto:dr_hugojurado@hotmail.com)  
 Univ of Miami Dept of Public Health Sciences, Miami, FL; Ministerio de Salud Pública del Ecuador
- 2:30 It's the time of the season: Effects of seasonal photoperiods and fluctuating temperatures on bloodmeals and reproductive investment of *Aedes triseriatus*  
**Katie Westby** [kmwest2@illinoisstate.edu](mailto:kmwest2@illinoisstate.edu) and Steven A. Juliano  
 School of Biological Sciences, Illinois State Univ, Normal, IL
- 2:45 Exploitation of ecological traps for mosquito control  
**Allison M. Gardner** [amgardn2@illinois.edu](mailto:amgardn2@illinois.edu); B. F. Allan, E. J. Muturi  
 Entomology Dept, Univ of Illinois, Champaign, IL
- 3:00 Novel field-based carbon dioxide supplementation for mosquito sampling in limited resource areas

- Ryan Tokarz** [rtokarz@health.usf.edu](mailto:rtokarz@health.usf.edu); R. J. Novak  
Univ of South Florida, Tampa, FL
- 3:15 Genomic analysis of divergence within the malaria vector  
*Anopheles melas*  
**Kevin C. Deitz** [kcdeitz@tamu.edu](mailto:kcdeitz@tamu.edu)  
Giri Athrey, Michael C. Fontaine, Nora J. Besansky, Daniel E.  
Neafsey and Michel A. Slotman  
Dept of Entomology, Texas A&M Univ, College Station, TX; Dept  
of Biology, Univ of Notre Dame, Notre Dame, IN; Broad Institute  
of MIT and Harvard Univ, Boston, MA
- 3:30 – 4:00      **BREAK**
- 4:00 – 6:00      **SYMPOSIUM 6: BEHAVIORAL ECOLOGY**  
**Moderators:** **Rui-De Xue** [xueamcd@gmail.com](mailto:xueamcd@gmail.com)  
and **Gunter Muller** [guntercmuller@hotmail.com](mailto:guntercmuller@hotmail.com)  
Anastasia Mosquito Control District, St. Augustine, FL;  
Kuvim Centre, Hebrew Univ, Jerusalem, Israel
- 4:00      Sugar-seeking and feeding behavior by *Anopheles gambiae*  
**Woodbridge Foster** [foster.13@osu.edu](mailto:foster.13@osu.edu)  
Ohio State Univ, Columbus, Ohio
- 4:20      Host seeking attractants  
**Daniel L. Kline** [dan.kline@ars.usda.gov](mailto:dan.kline@ars.usda.gov)  
Center for Medical, Agricultural, and Veterinary Entomology,  
USDA-ARS, Gainesville, FL
- 4:35      Response of Culex mosquitoes to animals/people  
**T.Y. Zhao** [tongyanzhao@126.com](mailto:tongyanzhao@126.com)  
Beijing Institute of Microbiology and Epidemiology, Beijing,  
China
- 4:50      Blood feeding activity of *Aedes* mosquitoes  
**A. Althbyani** [aalthbyani@ut.edu.sa](mailto:aalthbyani@ut.edu.sa)  
Univ of Tabuk, Tabuk, Saudi Arabia
- 5:05      Blood feeding behavior of large *Psorophora* mosquitoes  
**Rui-De Xue** [xueamcd@gmail.com](mailto:xueamcd@gmail.com)  
Anastasia Mosquito Control District, St. Augustine, FL

- 5:15 Resting behavior and daily movement of *Anopheles gambiae*  
**Gunter Muller** [guntercmuller@hotmail.com](mailto:guntercmuller@hotmail.com)  
 Kuvim Centre, Hebrew Univ, Jerusalem, Israel
- 5:35 A screen of native plants potentially used for mosquito repellent  
**Theeraphap Chareonviriyaphap** [faasthc@ku.ac.th](mailto:faasthc@ku.ac.th)  
 Dept of Entomology, Kasetsart Univ, Bangkok, Thailand
- 5:50 Development and introduction of deltamethrin for ULV  
 application to control adult mosquitoes in the United States  
**Gordon Morrison** [gordon.morrison@bayer.com](mailto:gordon.morrison@bayer.com), Kurt Vandock,  
 Britt Baker and Byron Reid  
 Bayer CropScience LP, Research Triangle Park, NC, US
- 6:00 **BUSINESS MEETING:**  
**Douglas Norris** [dnorris3@jhu.edu](mailto:dnorris3@jhu.edu)  
 President of SOVE  
 Johns Hopkins Bloomberg School of Public Health Dept  
 of Molecular; Microbiology and Immunology Johns  
 Hopkins Malaria Research Institute, Baltimore, MD  
**Major S. Dhillon** [mdhillon@northwestmvcd.org](mailto:mdhillon@northwestmvcd.org)  
 SOVE Secretary-Treasurer  
 Corona, CA

## **THURSDAY – OCTOBER 2, 2014**

- 8:00 – 9:30 **SYMPOSIUM 7: OPERATIONAL SURVEILLANCE AND  
 CONTROL FOR DENGUE/CHIKUNGUNYA VECTORS**  
**Moderators: James E. Cilek** [james.cilek@med.navy.mil](mailto:james.cilek@med.navy.mil)  
 Navy Entomology Center of Excellence, Jacksonville, FL
- 8:00 *Aedes aegypti* surveillance and control in an epicenter of  
 dengue transmission  
**Roberto Barrera** [amz9@cdc.gov](mailto:amz9@cdc.gov) and Ryan Hemme  
[wma0@cdc.gov](mailto:wma0@cdc.gov)  
 CDC/OID/NCEZID, San Juan, Puerto Rico

- 8:15 *Aedes albopictus* surveillance and control: Lessons learned from the area-wide management project  
**Ary Faraji** [ary@slcmad.org](mailto:ary@slcmad.org)  
Salt Lake City Mosquito Abatement Dist., Salt Lake City, UT
- 8:30 Operational control of *Aedes aegypti* from the perspective of a mosquito control district  
**Chris Lesser** [christopher.lesser@manateemosquito.com](mailto:christopher.lesser@manateemosquito.com)  
and Mark Latham [marklatham@manateemosquito.com](mailto:marklatham@manateemosquito.com)  
Manatee Mosquito Control Dist., Palmetto, FL
- 8:45 Status of chikungunya in the Americas: Where do we stand today?  
**Roger Nasci** [rnasci@cdc.gov](mailto:rnasci@cdc.gov)  
Division of Vector-Borne Diseases Centers for Disease Control and Prevention, Fort Collins, CO
- 9:00 US Department of Defense surveillance recommendations on management of chikungunya and dengue vectors  
**James E. Cilek** [james.cilek@med.navy.mil](mailto:james.cilek@med.navy.mil)  
Navy Entomology Center of Excellence, Jacksonville, FL
- 9:15 Discussion  
Led by **James E. Cilek** [james.cilek@med.navy.mil](mailto:james.cilek@med.navy.mil)  
Navy Entomology Center of Excellence, Jacksonville, FL
- 9:30 – 11:00 **SYMPOSIUM 8: ECOLOGY AND PREVENTION OF TICK-BORNE DISEASES**  
**Moderator: Laura E. Hayes** [laura.hayes@ct.gov](mailto:laura.hayes@ct.gov)  
Dept of Entomology, The Connecticut Agricultural Experiment Station, New Haven, CT
- 9:30 Blacklegged tick abundance and behavior as key determinants of Lyme disease risk in the eastern United States  
**Graham J. Hickling** [ghicklin@utk.edu](mailto:ghicklin@utk.edu)  
and Jean I. Tsao [tsao@msu.edu](mailto:tsao@msu.edu)  
The Center for Wildlife Health, Dept Forestry, Wildlife and Fisheries; The Univ of Tennessee Institute of Agriculture, Knoxville, TN; Depts of Fisheries & Wildlife and Large Animal Clinical Sciences, Michigan State Univ, East Lansing, MI

- 9:45 Host-targeted measures and biopesticides for the integrated management of blacklegged ticks  
**Laura E. Hayes** [laura.hayes@ct.gov](mailto:laura.hayes@ct.gov), Scott C. Williams, Goudarz Molaei and Kirby C. Stafford, III  
 Dept of Entomology, The Connecticut Agricultural Experiment Station, New Haven, CT; Dept of Forestry and Horticulture, CAES, New Haven, CT; Dept of Environmental Sciences at Dept of Forestry and Horticulture
- 10:00 Current status of the cattle fever tick eradication program: Challenges and successes  
**K.H. Lohmeyer** [kim.lohmeyer@ars.usda.gov](mailto:kim.lohmeyer@ars.usda.gov), D.B. Thomas, R.J. Miller and A.A. Perez de Leon  
 US Dept of Agriculture, Agricultural Research Service, Knippling Bushland U.S Livestock Insects Research Lab, Kerrville, TX; USDA-ARS Cattle Fever Tick Research Lab, Mission, TX
- 10:15 The pathogenic landscape: exotic weeds facilitate the invasion and survival of livestock disease vectors in the Cattle Fever Tick permanent quarantine zone along the Rio Grande in Texas  
**J. Goolsby** [john.goolsby@ars.usda.gov](mailto:john.goolsby@ars.usda.gov), D. Thomas, R. Miller, W. Osbrink, G. Schuster, D. Hewitt, R. DeYoung, P. Ortega, P. Teel, A. Racelis, M. Messenger, D. Strickman and A. Perez de Leon  
 US Dept of Agriculture, Agricultural Research Service, Cattle Fever Tick Research Laboratory, Mission, TX; USDA-ARS Knippling Bushland U.S Livestock Insects Research Laboratory, Kerrville, TX; Texas A&M Univ – Kingsville, Caesar Kleberg Wildlife Research Institute; Texas A&M Univ, Dept of Entomology, College Station, TX; Univ of Texas – Rio Grande Valley, Edinburg, TX; USDA-APHIS-VS, Beltsville, MD; USDA-ARS, National Program Staff, Beltsville, MD
- 10:30 Emergence of Babesiosis in the northeastern United States  
**Maria A. Diuk-Wasser** [maria.diuk@yale.edu](mailto:maria.diuk@yale.edu), Jessica M. Dunn, Sarah L. States, Stephen Davis, Edouard G. Vannier and Peter J. Krause  
 Dept. of Ecology, Evolution and Environmental Biology, Columbia Univ; Dept of Epidemiology of Microbial Diseases at



Yale School of Public Health; RMIT; Div of Geographic Medicine and Infectious Diseases, Tufts Medical Center, Boston, MA

10:45 Why do cattle fever ticks have multiple acetylcholinesterases?

**K.B. Temeyer** [kevin.temeyer@ars.usda.gov](mailto:kevin.temeyer@ars.usda.gov)

USDA-ARS Knippling Bushland U.S Livestock Insects Research Laboratory, Kerrville, TX

11:00 – 11:20 **BREAK**

11:20 – 12:50 **SYMPOSIUM 9: Worminators, Foldscopes, Kite Patches, Unmanned Aerial Systems and More – Inspiring Inventions for Controlling Mosquitoes and Reducing the Global Impact of Vector-borne Diseases**

**Moderator: Piper Kimball** [piper@leateam.com](mailto:piper@leateam.com)

Leading Edge Associates, Inc.

11:20 The Worminator for Quantitative Worm Assays

**Judy Sakanari** [judy.sakanari@ucsf.edu](mailto:judy.sakanari@ucsf.edu), Jiri Gut and Chris Marcellino

Center for Parasitic Diseases, Univ of Calif, San Francisco, CA

11:40 Foldscopes

**Manu Prakash** [manup@stanford.edu](mailto:manup@stanford.edu)

Dept of Bioengineering, Stanford Univ, Stanford, CA

12:00 Mosquitoes meet Microfluidics: Molecular Surveillance for Arthropod Borne Diseases

**Haripriya Mukundarajan** [haripria@stanford.edu](mailto:haripria@stanford.edu)

Dept of Mechanical Engineering, Stanford Univ, Stanford, CA

12:20 Challenges and Opportunities in Development of the Kite Patch

**Molly B. Schmid** [mschmid@iecrowd.com](mailto:mschmid@iecrowd.com)

Life and Health Technologies IeCrowd, Inc., Riverside, CA

12:35 Unmanned Aerial System Integration in Vector Control – Performance, Payload, Efficacy. How close are we to taking flight?

**William Reynolds** [breyolds@leateam.com](mailto:breyolds@leateam.com)

Leading Edge Associates, Inc., Waynesville, NC

12:50 **CLOSING OF THE CONFERENCE**