

AMCA®

THE AMERICAN MOSQUITO CONTROL ASSOCIATION



AMERICAN MOSQUITO CONTROL ASSOCIATION

AMCA

2018

84th Annual Meeting

FEBRUARY 26-MARCH 2

KANSAS CITY, MO

**SHERATON KANSAS
CITY HOTEL
AT CROWN CENTER**

PROGRAM



A nighttime photograph of the Kansas City skyline, featuring the illuminated buildings of the Crown Center area in the foreground and the city's financial district skyscrapers in the background.

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AMCA 84 TH ANNUAL MEETING AT-A-GLANCE				
Mon February 26	2:00 pm - 6:30 pm	Registration and Internet Hub (Ballroom Pre-Function)		
	1:00 pm - 5:30 pm	Speaker Ready Room (Northrup)		
	1:00 pm - 4:00 pm	Committee Meetings (Benton B, Van Horn A, B, C)		
	2:00 pm - 4:00 pm	Poster Set-up (Exhibit Hall A)		
	5:00 pm - 8:00 pm	Grand Opening of the Exhibit Hall and Welcome Reception (Exhibit Hall A) – Badge Required for Entry		
Tues February 27	7:00 am - 5:30 pm	Registration and Internet Hub (Ballroom Pre-Function)		Speaker Ready Room (Northrup)
	8:00 am - 12:00 pm	Plenary Session (Atlanta/ New York/ San Francisco)		
	10:00 am - 10:20 am	Refreshment Break (Terrace)		
	12:00 pm - 1:45 pm	President's Luncheon and Exhibits Open (Exhibit Hall A) – Badge Required for Entry		
	1:45 pm - 3:15 pm	Student Competition Symposium I (New York)	Larval Mosquito Control I (Chicago)	Legislative and Regulatory Symposium I (session ends at 3:20 pm) (Atlanta)
	3:15 pm - 4:00 pm	Refreshment Break in Exhibit Hall / Ice Cream Social (Exhibit Hall A) – Ticket Required		
	4:00 pm - 5:30 pm	Student Competition Symposium II (New York)	Larval Mosquito Control II/ Adult Control I (Chicago)	Legislative and Regulatory Symposium II (Atlanta)
	5:45 pm - 7:15 pm	Latin American Discussion (Atlanta)		
	7:00 am - 5:30 pm	Registration and Internet Hub (Ballroom Pre-Function)		Speaker Ready Room (Northrup)
Wed February 28	7:30 am - 8:30 am	Refreshment Break (Exhibit Hall A)		
	8:30 am - 10:00 am	Student Competition Symposium III (New York)	Aerial Control/ Aviation (Chicago)	Operations (Atlanta)
	10:00 am - 10:45 am	Refreshment Break in Exhibit Hall (Exhibit Hall A)		
	10:45 am - 12:15 pm	Arbovirus Detection Using Loop-Mediated Isothermal Amplification Symposium (New York)	Publ Hlth Entomol Research at Undergrad Institutions, Including Professional Career Development in Academia Symposium (Chicago)	PR/Education (session ends at 12:25 pm) (Atlanta)
	12:15 pm - 1:45 pm	Poster Session Luncheon (Exhibit Hall A) – Badge Required for Entry		
	12:15 pm - 4:00 pm	Exhibits Open (Exhibit Hall A)		
	1:45 pm - 3:15 pm	Unmanned Aerial Systems in Mosquito Control I (New York)	Young Professionals Symposium I (Chicago)	Disease/Vector Studies I (Atlanta)
	3:15 pm - 4:00 pm	Refreshment Break in Exhibit Hall (Exhibit Hall A)		
	4:00 pm - 5:30 pm	Unmanned Aerial Systems in Mosquito Control II (New York)	Young Professionals Symposium II (Chicago)	Disease/Vector Studies II (Atlanta)
	5:30 pm - 6:30 pm	Young Professionals Social (Van Horn) – Invitation Only Event		
Thu March 1	7:30 am - 1:00 pm	Registration and Internet Hub (Ballroom Pre-Function)		Speaker Ready Room (Northrup)
	7:30 am - 9:00 am	Exhibits Open (Exhibit Hall A)		
	9:00 - 10:30 pm	Integrated Tick Management Symposium (New York)	Pesticide Resistance and Management – From Theory to Practice Symposium I (session ends at 10:40 am) (Atlanta)	Arthropod Vector Highlights Symposium (San Francisco)
	10:30 am - 10:45 am	Refreshment Break (Outside Sessions)		
	10:45 am - 4:45 pm	Trustee/Commissioner Tour (Off-Site Event) – Ticket Required		
	10:45 am - 12:00 pm	AMCA Annual Member Meeting (Atlanta)		
	1:30 pm - 3:00 pm	Equipment/GIS (New York)	Vector Borne Diseases Centers of Excellence Symposium (Chicago)	Pesticide Resistance and Management – From Theory to Practice Symposium II (session ends at 3:10 pm) (Atlanta)
	3:15 pm - 6:00 pm	Leisure Time (No official AMCA sessions/events)		
	6:00 pm - 7:00 pm	Pre-Banquet Social (Terrace)		
	7:00 pm - 9:30 pm	Banquet (Atlanta/ New York/ San Francisco) – Ticket Required		
Fri March 2	7:30 am - 11:00 am	Registration and Internet Hub (Ballroom Pre-Function)		
	7:30 am - 12:00 pm	Speaker Ready Room (Northrup)		
	7:30 am - 11:00am	Board of Directors Meeting (Benton B)		
	8:30 am - 10:00 am	Adult Control II (New York)	Bridging the Gap Between Research and Operation Symposium I (Atlanta)	Behavior/Biology I (San Francisco)
	10:00 am - 10:30 am	Break (Foyer)		
	10:30 am - 12:00 pm	Adult Control III (New York)	Bridging the Gap Between Research and Operation Symposium II (Atlanta)	Behavior/ Biology II (San Francisco)
	12:00 pm	Meeting Adjourns – See You in Orlando, FL in 2019!		

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How to READ THE PROGRAM

Day and Date at top of each page

Start – End Time MORNING OR AFTERNOON

Symposium/Session Title

Organizer/Moderator: **Name**

Start Time – End Time (may be different from start-end time in main heading, check each symposium/session)

Room Location

Time Abstract # Presentation Title
Presenter, Other Author(s)

Time Abstract # Presentation Title
Presenter, Other Author(s)

And so on

A number preceded by a **PL** indicates a plenary session talk; a number preceded by a

P- indicates a poster and all other numbers are oral presentations. If there is no number listed, there is no abstract associated with that particular presentation. Speakers and other authors are found in the program book author index.

All author affiliations are listed in the online abstract book.

Maps to meeting locations and the exhibitors are on the last pages of the program book.

INTRODUCTION

Message from the President

Wayne Gale



Greetings everyone! Welcome to the 84th annual meeting of the American Mosquito Control Association. It has been a fast paced, busy and challenging year for many of us in the mosquito and vector control profession. Now we come together to share our experiences, discoveries and challenges from this past year, and I want to thank Jason Kinley, AMCA Vice President, for arranging an outstanding program for this year's meeting. There are 13 invited symposia, highlighting timely issues and topics related to integrated mosquito management, along with over 250 submissions for presentations and posters! The plenary session keynote presentation this year will feature Dr. Tracey McNamara, the discoverer of West Nile virus in the United States. Jason would like to thank all those who have submitted symposia, abstracts and posters this year along with special thanks to Heather Gosciniak, Allison Leyh, Brittany Noll and Heidi Jetter at Association Headquarters for their assistance. I look forward to a great time of learning, fun and fellowship as we meet here in Kansas City.

A special thanks to all the vendors who provided stipends for the Young Professionals Industry Shadowing Program. Fourteen of our YPs were awarded stipends to attend this year's meeting and they will have an opportunity to work at their sponsor's booth during the meeting. Please take the opportunity to visit our vendors, and also to encourage the YPs that have taken advantage of this great opportunity.

Finally, I hope everyone has time to enjoy some of the sights and history of Kansas City. The trustee tour will focus on the past, present, and future with a program at the National World War I Museum. Let the meeting begin!

AMCA 2017-2018 Board of Directors

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ESA Subcommittee/ Pollinators

Subcommittee

Michael Riles

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Program (PESP) Subcommittee

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Young Professionals Committee
Kyndall Dye Braumuller

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Wayne Gale, *AMCA President*
Jason Kinley, *AMCA Vice President*
Jason Trumbetta, *AMCA Board, Industry Director*
Bryan Massery, *Education Day Coordinator*

PROGRAM COMMITTEE

Jason Kinley, *Chair, AMCA Vice President*
Lee Cohnstaedt, *Latin American Symposium*
Brian Byrd, *Student Competition*
Dianne Crane, *Design/Layout & Copy Editor*

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Heather Gosciniak, *Executive Director*
Heidi Jetter, *Meeting Manager*
Brittany Noll, *Client Services Coordinator*
Allison Leyh, *Meeting Coordinator*
Christine Cocove, *Accountant*
Joseph Mastrine, *Accountant*
Amy Breslin, *Data Entry*

AMCA RESEARCH FUND

2018 Research Fund Awardees

Dana Price, Ph.D., "Assessing the arboviral landscape via metagenomic analyses of sentinel FTA cards", Rutgers, The State University of New Jersey.
Kristy Burkhalter, "Field evaluation of arbovirus detection using honey cards in California", Centers for Disease Control and Prevention.

In 2015, the American Mosquito Control Association was approached to begin administering the Mosquito Research Foundation. Re-named the AMCA Research Fund (AMCARF), the new program seeks to fund research that will lead to new tools and strategies for mosquito surveillance and control, ultimately protecting the public from mosquito-borne disease and discomfort from mosquito bites.

Contributions to the AMCARF are now being accepted!

The AMCA Research Fund is currently accepting contributions for future research on mosquito control and related topics. Contributions can be made online at <http://www.mosquito.org/researchfund> or by check payable to:

AMCA Research Fund
ATTN: Heather Gosciniak
1120 Route 73, Ste. 200
Mount Laurel, NJ 08054

AMCA would like to thank the following contributors (since April 27, 2017):

Lee County Mosquito Control District
Sacramento-Yolo Mosquito & Vector Control District

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Wednesday Afternoon Refreshment Break

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AG-Nav Inc. 30 Churchill Dr. Barrie, ON L4N8Z65 Canada Phone: 705-734-0909 Email: landonr@agnav.com www.agnav.com	525
AllPro Vector Group 640 Griswold Street Suite 200 Northville, MI 48167 Phone: 248-773-7460 Email: sales@allprovector.com www.allprovector.com	211
AMCA Young Professionals 1120 Route 73 Suite 200 Mount Laurel, NJ 08054 Phone: 856-439-9222 Email: amca@mosquito.org https://amcayps.wordpress.com/	117
American Longray LLC 23287 Foley Street Unit B Hayward, CA 94545 Phone: 415-830-9494 Email: brian@pestgoaway.com www.pestgoaway.com	213
American Mosquito Control Association 1120 Route 73 Suite 200 Mount Laurel, NJ 08054 Phone: 856-439-9222 Email: amca@mosquito.org www.mosquito.org	121

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Ceva Animal Health	604
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Local Arrangements Committee 2019	115
Orlando, FL	
London Foggers	111
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Maverick Drone Systems	514
12931 Eagle Creek Pkwy Savage, MN 55378 Phone: 612-269-9837 Email: joe.elling@maverickdrone.com www.maverickdrone.com	
MCES, LLC	107
2499 Old Lake Mary Suite #102 Sanford, FL 32771 Phone: 321-363-4977 Email: admin@mymces.com www.mymces.com	
Mosquito Illness Alliance	620
140 Magnolia Ridge Rd. Florence, MS 39073 Phone: 601-672-6687 Email: shrnsims@aol.com www.mosquitoillnessalliance.org	
New Mountain	105
6 Hawthorn Road Old Lyme, CT 06371 Phone: 860-691-1876 Email: sales@newmountain.com www.newmountain.com	
Phenix Print	624
9630 Bruceville Road Suite 106 Elk Grove, CA 95757 Phone: 916-683-1000 Email: eric@phenixprint.com www.phenixprint.com	

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www.pestweb.com/markets/public-health	

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E-mail: merz.3@nd.edu	
www.vectorbase.org	
Vestergaard	521
Email: eli@vestergaard.com	
www.vestergaard.com	
Wing Beats	113
200 Derby Woods Drive	
Lynn Haven, FL 32444	
Phone: 850-814-2610	
Email: sickerman@comcast.net	

General Information

Registration and Internet Hub Hours

Located in the Grand Ballroom Foyer

Monday, February 26	2:00 pm – 6:30 pm
Tuesday, February 27	7:00 am – 5:30 pm
Wednesday, February 28	7:30 am – 5:30 pm
Thursday, March 1	7:30 am – 1:00 pm
Friday, March 2	7:30 am – 11:00 am

Speaker Ready Room Hours

Located in Northrup

Monday, February 26	1:00 pm – 5:30 pm
Tuesday, February 27	7:00 am – 5:30 pm
Wednesday, February 28	7:30 am – 5:30 pm
Thursday, March 1	7:30 am – 1:00 pm
Friday, March 2	7:30 am – 12:00 pm

Exhibit Hall Hours

Located in Exhibit Hall A

Set-up:

Monday, February 26	8:00 am – 3:00 pm
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Viewing Hours:

Monday, February 26	5:00 pm – 8:00 pm
Tuesday, February 27	12:00 pm – 1:45 pm 3:15 pm – 4:00 pm
Wednesday, February 28	7:30 am – 8:30 am 10:00 am – 10:45 am 12:15 pm – 4:00 pm
Thursday, March 1	7:30 am – 9:00 am

Breakdown:

Thursday, March 1	9:00 am – 2:00 pm
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Poster Presentations

Poster presenters must locate their poster numbers in this program book and place their posters on the assigned poster boards in Exhibit Hall A. Presenters are required to attend their posters during the Poster Session on Wednesday, February 28 from 12:15 pm – 1:45 pm.

Poster Set-up:

Monday, February 26	2:00 pm – 4:00 pm
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Poster Removal:

Thursday, March 1	9:30 am – 12:00 pm
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Posters not removed by 12:00 pm on Thursday will be placed behind the registration desk and will be discarded if not claimed by noon on Friday.

ADA Requests

AMCA fully complies with the legal requirements of the Americans with Disabilities Act. If any participant of the Annual Meeting is in need of an accommodation, he/she should notify the AMCA registration counter and indicate the type of assistance needed. AMCA cannot ensure the availability of appropriate assistance without prior notice.

Breaks

AMCA will NOT provide coffee prior to the start of some morning sessions, so please plan accordingly. Sponsored beverage breaks are offered daily. Please refer to the program for times.

Education Day

Education Day is on Wednesday, February 28 from 8:00 am to 12:00 pm. AMCA volunteers will provide educational programs to visitors at the Primitivo Garcia Elementary School. Activities include presentations related to mosquitoes and mosquito control, and students will have the opportunity to have hands-on experiences with various mosquito and mosquito control related items. For information, please see the AMCA registration counter.

Internet Hub

The Internet Hub is located in the Grand Ballroom Foyer. Complimentary computer stations with internet/email access and word processing are provided. Use of these computers is limited to 15 minutes. These stations are not intended for editing or printing long documents. Please use the hotel business center for these purposes.

Latin American Symposium

The 28th Annual Latin American Symposium, held all day Wednesday, has simultaneous English translation of Spanish oral presentations. This is a unique opportunity to learn about mosquito research and control in Latin America. Please see the technician in the back of the room for a headset.

Meals

The Monday reception is not a full dinner. The Tuesday and Wednesday lunches will be served in the Exhibit Hall. The banquet on Thursday is a full dinner. No breakfasts are served at the Annual Meeting.

Meeting Evaluations

The internet-based Annual Meeting evaluation will be emailed to all attendees following the meeting. We encourage all attendees to complete the survey so we can continue to improve the AMCA Annual Meeting.

Member Meeting

The Annual Member Meeting is on Thursday from 10:45 am – 12:00 pm in the Atlanta room. The member/business meeting updates the membership on AMCA finances and committee activities as well as new initiatives. All members are encouraged to attend.

Moderators

Moderators are required to arrive in their session room at least 10 minutes prior to the start of the session to review the audiovisual aids, timers, and lighting with the projectionist. Papers must be given at the scheduled times. If a paper is canceled or a speaker does not appear, do not advance to the next speaker, but use the open time for questions and discussion.

Name Badge

A name badge is required for admission to all meeting sessions and the Exhibit Hall. Individual function tickets are also required for receptions and the banquet.

Speaker Presentations

Speakers with PowerPoint presentations should have already uploaded their PowerPoint files online. If you have not done so, contact the audiovisual coordinator in the Speaker Ready Room as soon as possible.

Trustee Tour Pick-up

All trustees, commissioners, and their companions should report to the Lobby of the Sheraton Kansas City Hotel on Thursday. Please see your tour ticket and registrations for more information.

Young Professionals Activities

The AMCA Young Professionals will be hosting numerous events throughout the Annual Meeting. Please see the listing of events below. If you have any questions regarding these activities, please visit the AMCA Young Professionals booth 117 located in the Exhibit Hall.

Young Professionals Welcome Dinner

See addendum for full details. This YP-only event is sponsored by Terminix and requires a ticket for entry, as space is limited. Visit the YP booth to pick up your ticket (if you've RSVP'd) or to inquire about availability.

Young Professionals Career Round-Table Symposium

will be held on Wednesday, February 28 from 1:45 pm - 5:30 pm in the Chicago meeting room. The symposium will include a brief meeting followed by round-table career discussions with field experts. Check program for more symposium details.

Young Professionals Social will be held on Wednesday, February 28 from 5:30 pm to 6:30 pm in the Van Horn

room. The event will include a one-hour open bar social and light hors d'oeuvres. The event is sponsored by AMVAC. Check program for more details.

Young Professionals Promo Booth will be hosted in the Exhibit Hall at booth 117. Come see us during breaks for free games, prizes, and group information.

Monday, February 26, 2018

SCHEDULE

1:00 PM – 4:00 PM	AMCA Committee Meetings
1:00 PM – 2:00 PM	Public Relations <i>Benton B</i>
	Legislative & Regulatory <i>Van Horn A</i>
	Membership <i>Van Horn B</i>
2:00 PM – 3:00 PM	Finance <i>Benton B</i>
	Legislative & Regulatory <i>Van Horn A</i>
	Publications <i>Van Horn B</i>
3:00 PM – 4:00 PM	Training & Member Education <i>Benton B</i>
	Bylaws & Policy <i>Van Horn A</i>
	JAMCA Editorial Board <i>Van Horn B</i>
	Science & Technology <i>Van Horn C</i>
2:00 PM – 4:00 PM	Poster Set-Up <i>Exhibit Hall A</i>
5:00 PM – 8:00 PM	Grand Opening of the Exhibit Hall and Welcome Reception <i>Exhibit Hall A</i> (Badge Required for Entry)
	<i>Welcome Reception is sponsored by Central Life Sciences</i>

Notes

Tuesday, February 27, 2018

8:00 AM – 12:00 PM PLENARY SESSION

Organizer/Moderator: **Jason Kinley**

8:00 AM – 12:00 PM

Meeting Room: Atlanta/ New York/ San Francisco

8:00	Call to Order Wayne Gale , AMCA President
8:05	Welcome to Kansas City
8:10	Program Announcements Jason Kinley , AMCA Vice President/Program Chair
8:15	Presidential Address Wayne Gale
8:30	Awards Presentation Wayne Gale
9:05	AMCA Memorial Lecture Honoree: Fred Knapp Lecturer: Dr. Steve Presley
10:00	Break
10:20 PL-1	“The Species Gap” – Are we better prepared today for zoonotic threats than we were in 1999? Dr. Tracey McNamara
11:05 PL-2	From Chaos to Calm: Professional Mosquito Control Response to Hurricanes Harvey, Irma, and Maria. A Panel Discussion Andrea Leal , district perspective; Janet McAllister , CDC perspective; Adrian Rogers , State of Florida response perspective; Whitney Qualls , State of Texas response perspective; Mark Breidenbaugh , military response perspective; Dan Markowski , contractor perspective; Jason Trumbetta , insecticide supply perspective

President's Luncheon and Exhibits

Open

12:00 PM - 1:45 PM

Exhibit Hall A

President's Luncheon is sponsored by Valent BioSciences

Tuesday, February 27, 2018

1:45 PM – 3:15 PM* **AFTERNOON SESSIONS**
*unless otherwise noted

**Exploring Innovative *Aedes aegypti*
Surveillance and Control Solutions
(IVCC, USAID and the Gates Foundation)
Symposium I**

Organizer/Moderator: **Julian Entwistle**

1:45 PM - 3:15 PM

Meeting Room: *San Francisco*

- | | | |
|------|---|---|
| 1:45 | 1 | IVCC: A global vector product development partnership
Nick Hamon |
| 2:10 | 2 | The challenges of surveillance and control of <i>Aedes aegypti</i>
Dan Strickman |
| 2:35 | 3 | USAID and IVCC partnering to fill <i>Aedes aegypti</i> surveillance and control gaps
Julian Entwistle |
| 2:55 | 4 | Automatic insect recognition with optical sensors with variability of temperature and humidity
Gustavo Batista , André Maletzke,
Claudia Milare, Barbara Nadai, Jesse Saroli, Shailendra Singh, Juliano Corbi, Eamonn Keogh, Agenor Mafra-Neto |

Larval Mosquito Control I

Moderator: **Seth Britch**

1:45 PM - 3:15 PM

Meeting Room: *Chicago*

- | | | |
|------|---|--|
| 1:45 | 5 | Efficacy of area-wide larvicide application targeting <i>Aedes aegypti</i> in New Orleans, LA
Sarah Michaels , Edward Foster, Brendan Carter, Princeton King, Cynthia Harrison, Claudia Riegel |
| 1:55 | 6 | Ground ULV application of Bti-based larvicide mixed with permethrin-based adulticide in a simulated urban habitat in a cool-humid environment against <i>Aedes aegypti</i> and <i>Aedes albopictus</i>
Seth Britch , Kenneth Linthicum, Robert Aldridge, Frances Golden, Jessika Blersch |

Tuesday, February 27, 2018

- 2:05 7 Heterodissemination: Targeting the larval habitat of malarial vectors with a cohabiting species carrying insect growth regulator
Nicholas Indelicato, Ary Faraji, Ron Oppenheimer, Isik Unlu
- 2:15 8 Insights from a first-year storm drain bicycle application program
Carter Synhorst
- 2:25 9 Integrated management and prevention of *Aedes* and *Anopheles* mosquitoes through plant extracts along with selective chemicals and Bti
Shabab Nasir
- 2:35 10 Development of mosquito larval emergence model using benthic macroinvertebrate communities
Dong Gun Kim, Hwang Goo Lee, Hyun Jung Kim, Yeon Jae Bae
- 2:45 11 Comparative efficacy of Bti, spinosad, and methoprene larvicides applied with thermal fog in a hot-humid tropical environment against *Aedes* and *Anopheles*
Seth Britch, Kenneth Linthicum, Robert Aldridge, Frances Golden, Alongkot Ponlawat, Arissara Pongsiri, Patcharee Khongtak
- 2:55 12 Using Natular to control *Coquillettidia perturbans*, a potential bridge vector of EEE virus in the Northeast
Derek Drews
- 3:05 13 SPLAT BAC: Finally, a long lasting green larvicide that harnesses the power of semiochemicals
Agenor Mafra-Neto, Teun Dekker, Rodrigo Silva, Jesse Saroli, Leonard Mboera, Elison Elieza

Legislative and Regulatory Symposium I

Organizer/Moderator: **Angela Beehler**

1:45 PM - 3:20 PM

Meeting Room: Atlanta

- 1:45 Introduction to the legislative and regulatory symposium
Angela Beehler

Tuesday, February 27, 2018

- 1:50 15 A tale of three competencies: Mosquito surveillance and control capabilities across the United States and its legislative implications
Oscar Alleyne and Chelsea Gridley-Smith
- 2:05 16 Public health confronts the mosquito: Developing sustainable state and local mosquito control programs
Chester Moore
- 2:20 17 The Gateway - web-based data management for surveillance and pesticide usage
Christopher Barker and Jody Simpson
- 2:35 18 Regulation of genetically modified mosquito trial in the Florida Keys
Andrea Leal
- 2:50 19 Unmanned aerial systems (UAS) in mosquito and vector control: A regulatory overview
Joel Buettner
- 3:05 20 Pollinator protections and pesticide labels
John Paige, Jan Brill, Frank Wong

Student Competition Symposium I

Moderator: **Brian Byrd**

1:45 PM - 3:15 PM

Meeting Room: New York

- 1:45 21 The 29th Annual Student Paper Competition of the American Mosquito Control Association
Brian D. Byrd
- 1:50 22 Plant oils as future enhancers for the control of insecticide-susceptible and insecticide-resistant strains of mosquitoes
Edmund Norris, Maria Archevald-Cansobre, Aaron Gross, Lyric Bartholomay, Joel Coats

Tuesday, February 27, 2018

- 2:02 23 Death by cattle: Zooprophylaxis and endectocide efficacy in the control of *Anopheles* mosquitoes
Annie Rich, Nancy Hinkle, Seth Irish
- 2:14 24 Can sub-lethal exposure to spatial repellents affect mosquito fecundity or oviposition behavior?
Christopher Bibbs, Daniel Hahn, Phillip Kaufman, Rui-de Xue
- 2:26 25 Insecticide resistance survey of *Stegomyia* mosquito species throughout Texas jurisdictions
Alexander Wilson-Fallon, Hannah Greenberg, Steven Peper, Katelyn Haydett, Steven Presley
- 2:38 26 Improving the CDC light trap
Thomas Hempy, Elin Maki, Dustin Swanson, Lee Cohnstaedt
- 2:50 27 The effects of larval exposure to pesticides on the adult male reproductive system of *Culex quinquefasciatus*
Shiloh Judd and Kristen Healy
- 3:02 28 The effects of temperature extremes and fluctuations on the invasive mosquito *Aedes albopictus*
Madeleine Chura, Kristen Healy, Rodrigo Diaz

3:15 PM – 4:00 PM ICE CREAM SOCIAL

Exhibit Hall A
(Badge Required for Entry,
Ticket Required for Service)

*Ice Cream Social is
sponsored by Valent
BioSciences*

Tuesday, February 27, 2018

4:00 PM – 5:30 PM* AFTERNOON SESSIONS

*unless otherwise noted

**Exploring Innovative *Aedes aegypti*
Surveillance and Control Solutions
(IVCC, USAID and the Gates Foundation)
Symposium II**

Organizer/Moderator: Julian Entwistle

4:00 PM - 5:35 PM

Meeting Room: San Francisco

- 4:00 29 VectorWEB: A network of connected smart mosquito traps
Margaret Glancey, Kimberly Ashman, Teja Maruvada, Wm. Patterson, Laura Scavo, Tristan Ford, Adam Goodwin, Jewell Brey, Collyn Heier, Soumyadipta Acharya
- 4:15 30 Lure and kill yeast interfering RNA larvicides
Molly Duman Scheel, Limb Hapairai, Keshava Mysore, Yingying Chen, Alexandra Lesnik, Na Wei, Nicole Achee, John Grieco, David Severson
- 4:30 31 Spatial repellents and attractants for personal and community protection
Jason Richardson
- 4:50 32 A human scent mimic to trap Zika mosquitoes
Conor McMeniman
- 5:05 33 An affordable, low technology hessian fabric emanator that releases transfluthrin vapour to protect against outdoor-biting *Aedes aegypti* in coastal Tanzania
Nicodem Govella, Alphonse Assenga, Gerry Killeen
- 5:20 34 Repelling vector mosquitoes with electric fields
Farooq Tanveer, Andreas Rose, Elies Molins, Krijn Paaijmans

Tuesday, February 27,2018

Larval Mosquito Control II/ Adult Control I

Moderator: **Nina Dacko**

4:00 PM - 5:30 PM

Meeting Room: Chicago

- 4:00 35 Control of *Aedes aegypti* using portable ULV and thermal fog sprayers in a hot-arid environment
Robert Aldridge, Frances Golden, Seth Britch, Melissa Snelling, Arturo Gutierrez, Kim Hung, Jennifer Henke, Jeremy Wittie, Kenneth Linthicum
- 4:10 36 Updates on the production process of the mosquito larval predator *Toxorhynchites rutilus* for use in releases in Harris County, TX
Anita Schiller and Mary Allen
- 4:20 37 Impact of *Tolyphocladium cylindrosporum* (Hypocreales: Ophiocordycipitaceae) on eggs of *Aedes aegypti* and *Aedes albopictus* at low temperature
Lina Flor-Weiler, Alejandro Rooney, Robert Behle, Ephantus Muturi
- 4:30 38 Eave Tubes: A novel malaria mosquito control tool – field results from Tanzania, Kenya, and Ivory Coast
Marit Farenhorst
- 4:40 39 Evaluation of the "CreeLog" for control of larval *Culex quinquefasciatus* in organically enhanced aquatic habitats
James Cilek
- 4:50 40 Public distribution of *Gambusia holbrooki* for peridomestic mosquito control in Hillsborough County, FL
Ron Montgomery
- 5:00 41 Preventing mosquito-borne diseases: A multi-modal approach
Robert Wirtz

Tuesday, February 27, 2018

- 5:10 42 How implementing a multi-modal approach to fight the spread of heartworm disease in dogs can help mosquito abatement professionals achieve their goals for controlling mosquitoes and the diseases they may spread in their communities
I. Craig Prior

Legislative & Regulatory Symposium II

Organizer/Moderator: **Angela Beehler**

4:00 PM - 5:30 PM

Meeting Room: Atlanta

- 4:00 44 AMCA's 20th annual Washington Day Conference
Stanton Cope
- 4:10 45 Update on U.S. Fish and Wildlife Service's guidance for mosquito control on National Wildlife Refuges
William Meredith
- 4:25 46 Status of updating Florida's White Paper on Mosquito Control
Doug Carlson, Aaron Lloyd, Roxanne Connelly
- 4:35 47 Best management practices for integrated mosquito management: A US update
Isik Unlu and William Schankel
- 4:50 48 AMCA-CDC Train the Trainer Program: An overview
Christopher Gregory and Janet McAllister
- 5:05 49 AMCA's CWA and NPDES legislation efforts
Gary Goodman
- 5:17 50 AMCA's federal funding initiatives
Gary Goodman

Tuesday, February 27, 2018

Student Competition Symposium II

Organizer/Moderator: **Brian Byrd**

4:00 PM - 5:30 PM

Meeting Room: New York

- 4:00 51 Modeling the spread of Zika virus in interconnected networks
Tanvir Ferdousi, Caterina Scoglio, Lee Cohnstaedt, D. McVey
- 4:12 52 Prevalence of canine heartworm in potential mosquito vector populations in Lubbock, TX, USA (2010-2016)
Katelyn Haydett, Steven Peper, Alexander Wilson-Fallon, Hannah Greenberg, Steven Presley
- 4:24 53 Probability of canine heartworm (*Dirofilaria immitis*) infection in mosquitoes from Lubbock, TX
Steven Peper, Katelyn Haydett, Hannah Greenberg, Alexander Wilson-Fallon, Steven Presley
- 4:36 54 Individual level network model for spatial temporal behavior of WNV and parameter estimation by Bayesian
Sifat Afroz Moon, Lee Cohnstaedt, Caterina Scoglio, D. McVey
- 4:48 55 Estimation of parameters and basic reproductive ratio for Japanese encephalitis transmission in the Philippines using a sequential Monte Carlo filter
Md Mahbubul Huq Riad, Caterina Scoglio, Lee Cohnstaedt, D. McVey
- 5:00 56 Geospatial predictive modelling of *Aedes aegypti* and *Aedes albopictus* mosquitoes in Texas
Hannah Greenberg, Alexander Wilson-Fallon, Steven Peper, Katelyn Haydett, Steven Presley
- 5:12 57 Ecological and socioeconomic perspectives on risk of juvenile mosquitoes in container habitats
Allison Parker and Brian Allan

**5:45 PM – 7:15 PM LATIN AMERICAN
DISCUSSION
Atlanta**

Tuesday, February 27, 2018

Wednesday, February 28, 2018

**7:30 AM – 8:30 AM EXHIBITS OPEN WITH
MORNING COFFEE**

Exhibit Hall A

8:30 AM – 10:00 AM* MORNING SESSIONS
**unless otherwise noted*

Aerial Control/Aviation

Moderator: **Jacob Hrtle**

8:30 AM - 10:10 AM

Meeting Room: Chicago

- | | |
|------|--|
| 8:30 | 58 Efficacy against mosquitoes following aerial applications of DeltaGard® Insecticide in Pasco County, FL
Dennis Moore , Ming Huang, Mike Greer, Agne Janusauskaitė, Tom Janousek, Neta Wicker, Jing Zhai |
| 8:40 | 59 Efficacy against mosquitoes following aerial applications of DeltaGard® Insecticide in Calcasieu Parish, LA
Scott Willis , Neta Wicker, Jing Zhai, Tom Janousek, Ming Huang |
| 8:50 | 60 Effect of variable environmental conditions on aerial ultra-low volume mosquito adulticide applications in Placer County, CA
Jacob Hrtle , Mario Boisvert, Mary Sorensen, Joel Buettner |
| 9:00 | 61 Automatic aerial delivery of <i>Bacillus thuringiensis israelensis</i> (Bti) for control of spring woodlot <i>Aedes</i> spp. in Michigan
Carl Doud and Charles Dinsmore |
| 9:10 | 62 Is a high-pressure serial spray system an affordable and economical option?
Nicole Williams |
| 9:20 | 63 Efficacy of aerially applied DeltaGard® against <i>Aedes aegypti</i> and <i>Culex quinquefasciatus</i> in Manatee County, FL
Katie Williams , Ming Huang, Neta Wicker, Jing Zhai, Christopher Lesser, Mark Latham, Eva Buckner, Ambyr Marsicano |

Wednesday, February 28, 2018

- 9:30 64 Effect of rice canopy height on the efficacy of aerial larvicide with VectoBac 12AS (AI *Bacillus thuringiensis israelensis*) over rice fields in Placer County, CA
Mary Sorensen, Jason Smith, Mario Boisvert, Joel Buettner
- 9:40 65 Texas mosquito control response following Hurricane Harvey
Mark Breidenbaugh, Karl Haagsma, Janet Mcallister
- 9:50 66 Aerial control of *Aedes aegypti* using etofenprox and/or methoprene via fixed-wing aircraft in a hot-arid environment
Robert Aldridge, Frances Golden, Seth Britch, Melissa Snelling, Arturo Gutierrez, Kim Hung, Jennifer Remmers, Mark Breidenbaugh, Kenneth Linthicum
- 10:00 67 Vertical distribution of mosquito mortality following aerial application of naled in open and canopied environments
Frances Golden, Seth Britch, Robert Aldridge, Kenneth Linthicum, Mark Breidenbaugh, Karl Haagsma, Jennifer Remmers, James Clark, Joanna Lake

Latin American Student Competition

Moderator: **Lee Cohnstaedt**

8:30 AM - 10:00 AM

Meeting Room: San Francisco

- 8:30 68 Mining activities associated with *Anopheles* larval habitats and malaria transmission in the northwest of Colombia
Marco Rojas, María Yasnot, Lorena Orjuela
- 8:45 69 Low insecticide resistance intensity in the three main malaria vectors in Colombia
Lorena Orjuela, Juliana Morales, Martha Ahumada, Juan Venegas, Maria Yasnot, Martha Quiñones

Wednesday, February 28, 2018

- 9:00 70 Molecular characterization of the sexual pathway of *Aedes aegypti*
Gerardo Trujillo-Rodriguez, Martha Lopez-Rodriguez, Adriana Flores-Suarez, Gustavo Ponce-Garcia, Iram Rodriguez-Sanchez
- 9:15 71 Role of human genomics in presenting symptomatology of Chikungunya infection
Martha Lopez-Rodriguez, Gerardo Trujillo-Rodriguez, Karina Trujillo-Murillo, Adriana Flores-Suarez, Gustavo Ponce-Garcia, Iram Rodriguez - Sanchez
- 9:30 72 New trap for catch and death of mosquitoes with emphasis on *Aedes aegypti* (Diptera: Culicidae)
Maria Vidal, Hector Parra, Jonny Duque

Operations

Moderator: **Chris Lesser**

8:30 AM - 10:00 AM

Meeting Room: Atlanta

- 8:30 73 Comparison of three treatment methods utilized by Pasco County Mosquito Control District to reduce *Ae. aegypti* in Pasco County, FL
Aaron Lloyd, Agne Janusauskaite, Dennis Moore
- 8:40 74 Zika in Miami: What was learned
Frank Clarke
- 8:50 75 Capturing innovative ideas – How the Metropolitan Mosquito Control District is striving to improve
Mark E. Smith
- 9:00 76 Evaluation of two surveillance traps for the collection of container mosquitoes in Pasco County, FL
Agne Janusauskaite, Mike Greer, Aaron Lloyd, Dennis Moore
- 9:10 77 Aerial treatments of larvicides for *Aedes aegypti* in a desert environment
Jennifer A. Henke

Wednesday, February 28, 2018

- 9:20 78 Need to quickly kill a bunch of domestic mosquitoes over a wide area and suppress the population by 95% over a season? Here's how!
Christopher Lesser and Mark Latham
- 9:30 79 Mosquito population dynamics during disaster events in Harris County, TX 2001- 2017
Martin Reyna Nava, Lauren Wilkerson, Mustapha Debboun
- 9:40 80 Evaluation of Biogents Sentinel 2 and Biogents-Bowl traps to collect *Aedes sierrensis* mosquitoes in a suburban setting in the Greater Salt Lake Area of Utah
Gregory S. White, Ary Faraji, Scott Gordon, Martin Geier
- 9:50 81 Successes and challenges of the vector control response during the Zika outbreak in the U.S. Virgin Islands
Krystal R. Seger, Brett Ellis, Amy Schnall, Joseph Roth

Student Competition Symposium III

Moderators: **Brian Byrd**

8:30 AM - 10:00 AM

Meeting Room: New York

- 8:30 82 Quantifying sources of insect specimen damage in CDC light trap collections
Jay Brown, Adam Wilcox, Dustin Swanson, William Yarnell, Lee Cohnstaedt
- 8:42 83 Circadian rhythms of activity and oviposition in *Phlebotomus papatasi*
Lindsey Faw, Nima Hajhashemi, Tatsiana Shymanovich, Gideon Wasserberg
- 8:54 84 Invasive Mosquito Project 2017 updates
Julie Tsecouras, William Walton, Lee Cohnstaedt, Russane Lowe

Wednesday, February 28, 2018

- 9:06 85 Genomic representation in an agent-based model of mosquito populations
William Nutt, Veena Mehta, Margaret MacDonell, Charles Macal, Jessica Trail
- 9:18 86 Mosquito-borne diseases:
Understanding environmental factors for agent-based modeling
Veena Mehta, William Nutt, Margaret MacDonell, Charles Macal, Jessica Trail
- 9:30 87 Rearing and predation experiments of the predacious mosquito *Toxorhynchites christophi* (Diptera: Culicidae)
Sang Woo Seok, Nattawut Sareein, Wang Gyu Kim, Yeon Jae Bae

10:00 AM - 10:45 AM BREAK, EXHIBITS OPEN

Exhibit Hall A

Break sponsored by Valent BioSciences

10:45 AM – 12:15 PM* **MORNING SESSIONS**

**unless otherwise noted*

Arbovirus Detection Using Loop-Mediated Isothermal Amplification Symposium

Organizer/Moderator: **Jackie Surls**

10:45 AM - 12:15 PM

Meeting Room: New York

- 10:45 88 Pro-AmpRT arbovirus detection assays and their applications
Jackie Surls
- 11:00 89 Laboratory and field evaluation of real time RT-LAMP and real time RT-PCR assays to detect West Nile virus in mosquito pools
Kristen Burkhalter, Michael O'Keefe, Zachary Watson, Theodore Green, Daniel Markowski
- 11:35 90 Assessment of the Pro-AmpRT LAMP assay to detect West Nile virus in the Franklin County Public Health Mosquito Management Program
Daniel Markowski, Cristina Flores, Charlie Broschart, Kristen L. Burkhalter

Wednesday, February 28, 2018

- 11:55 91 West Nile virus detection in avian samples using LAMP
Lauren Wilkerson, Martin Reyna, Mustapha Debboun

Latin American Symposium I

Organizer/Moderator: **Lee Cohnstaedt**

10:45 AM - 12:20 PM

Meeting Room: San Francisco

- 10:45 92 Life table analysis of two populations of *Aedes aegypti* (Diptera: Culicidae) under laboratory conditions in Bogotá (Colombia)
Jesús Escobar, Dorado Angélica, Ligia Moncada
- 10:57 93 Reproductive capacity of *Aedes aegypti* females fed with blood of different hosts under insectary conditions
Mauricio Casas-Martínez, Jesús Fernández-Herrera, Luis Fernando Díaz-Barrios, Miguel Muñoz-Reyes, José Luis Aguilar-Rodríguez, José Asunción Nettel-Cruz
- 11:09 94 Determination of irradiation dose for the sterilization of *Aedes aegypti* and *Aedes albopictus* for SIT-based vector control
J. Bond, Nancy Ávila, Carlos Marina, Pablo Lledo Ariane Dor, Adriana Ramírez-Osorio, Trevor Williams, Ildefonso Fernández-Salas
- 11:21 95 Vertical transmission of dengue virus in *Aedes aegypti* during the largest epidemic of the disease in Medellín, Colombia
Guillermo Rua-Uribe, Tatiana Giraldo, Omar Triana, Ana Mejía, Raul Rojo, Enrique Henao, Juliana Perez-Perez
- 11:33 96 Fitness evaluation of *Aedes aegypti* with different levels of deltamethrin resistance
Francisco González-Santillán, Yamili Contreras-Perera, Ana Alcalá-Castillo, Gustavo Ponce-García, Beatriz López-Monroy, Olga Karina Villanueva-Segura, Selene Gutiérrez-Rodríguez, Adriana E. Flores

Wednesday, February 28, 2018

- 11:45 97 Thermal-fog effectiveness of Aqua K-Othrine® (AI Deltamethrin 2%) to control *Aedes aegypti* indoors populations in Chiapas, southeast Mexico
Luis Alberto Cisneros-Vázquez, José Genaro Ordóñez-González, Ildefonso Fernández Salas
- 11:57 98 Field evaluation of ULV Lethal Mist 44EW (AI Malathion 40%) to control indoor and outdoor *Aedes aegypti* in Tapachula, Chiapas southeast Mexico
Luis Alberto Cisneros-Vázquez, José Genaro Ordóñez-González, Luis Alberto Cisneros-Vázquez, Ildefonso Fernández-Salas
- 12:09 99 IRS and ULV effectiveness of ACTELLIC® 300 CS (AI Pirimifós methyl 28.16%) and Actellic® Vectors / Actellic® 50 CE (Pirimiphos methyl 49% w / w) to control *Aedes aegypti* in Tapachula, Southern Mexico
José Ordoñez-González, Luis Cisneros-Vázquez, Teresa Ambriz-Barajas, Ildefonso Fernandez-Salas

PR/Education

Moderators: **Desireé Keeney**

10:45 AM - 12:25 PM

Meeting Room: Atlanta

- 10:45 100 What role does public education play in integrated mosquito management and how to work it into your district?
Jillian Meek
- 10:55 101 Zika virus prevention: A public health collaborative project
Milton Sterling
- 11:05 102 Mobile outreach in response to an unprecedented flood event on the Texas Gulf Coast-2017
Rebecca L. Riley, Sandra Kachur, Kenia Morales, Hevert Rios-Benitez, Mauricio Lopez, Lladira Aguilar, Kerry Lee
- 11:15 103 Larvicide Olympics, a mosquito field technician training program for success
Desireé Keeney

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- 11:25 104 Phase I: Horse populations in Cape May County
Stormy L. Freese and Peter Bosak
- 11:35 105 The role of community engagement in the control of *Aedes aegypti* mosquitoes
Anh Ton and Odette Reza-Brown
- 11:55 106 Measuring community engagement in Coachella Valley
Jennifer Henke, Gabriela Perezchica-Harvey, Jill Oviatt, David Jones, Antonio Molina, Abelina Torres
- 12:05 107 A community assessment for public health emergency response to inform the Zika outbreak response in the U.S. Virgin Islands
Krystal R. Seger, Joseph Roth, Brett Ellis, Amy Schnall, Esther Ellis
- 12:15 108 Greater Los Angeles Mosquito SWAT Lab
Kelly Middleton

Public Health Entomology Research at Undergraduate Institutions, Including Professional Career Development Considerations in Academia Symposium

Moderator: **William H. Dees**

10:45 AM - 12:15 PM

Meeting Room: Chicago

- 10:45 Introduction
William Dees
- 10:50 110 Undergraduates in research: Encouraging and excite students in public health research
Christopher Vitek
- 11:10 111 Undergraduate research in innovative mosquito control: A biology-chemistry initiative
William H. Dees, Omar Christian, Cecilia Richmond, Caroline Hennigan, Jill Hightower, Caleb Ardizzone

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- 11:25 112 Undergraduate involvement in mosquito microbiome research
Caroline E. Hennigan, William H. Dees, Victoria Hayes, Kaleb McDade, Taylor Derouen
- 11:40 113 Undergraduate mosquito research as a high impact teaching practice in environmental health
Brian D. Byrd
- 12:00 Q&A Panel

Exhibits Open

12:15 PM – 4:00 PM
Exhibit Hall A

Poster Session Luncheon

12:15 PM - 1:45 PM
Exhibit Hall A

Adult Control

- P-01 Briquet washout/dissolution and the illusion of long-term mosquito control of catch basins
Jim Roberts
- P-02 Field evaluation of the BG-Sentinel trap baited with different attractants for collecting *Aedes albopictus* in Thailand
Boonsong Jaichapor, Patcharee Khontak, Chanyapat Nitatsukprasert, Brian Evans, Alongkot Ponlawat
- P-03 Field comparisons of the Gravid *Aedes* Trap (GAT), BG-Sentinel 2 Trap, and Autocidal Gravid Ovitrap (AGO) for monitoring *Aedes aegypti* populations in Miami, FL and New Orleans, LA
Cassie Scott, Janet McAllister, Milena Guajardo, Lee Noel, Dominic Rose, Cynthia Harrison, Sarah Michaels, Claudia Riegel, Chalmers Vasquez
- P-04 Evaluation of a commercialized Autocidal Gravid Ovitrap for the control of *Aedes aegypti* and *Aedes albopictus* in three regions of the United States
Emily Kuhns, Samantha Whiteside, Daniel Murdock, Isik Unlu, Rudy Xue, Daniel Dixon, Donald Ward, Dawn Wesson, Michael Banfield

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- P-07 Field evaluation of CDC light traps for malaria vector surveillance in Thailand
Patcharee Khongtak, Boonsong Jaichapor, Brian Evans, Alongkot Ponlawat
- P-08 Implementation of smart mosquito monitoring system at three different cities in South Korea
Sumi Na, Hoonbok Yi, Jisun Doh, Hyeji Jang, Sojung Park, EunYoung Lee, Seungbie Hong, Jae-seung Yu, YeonJae Bae
- P-09 The effect of plant components and plant derivatives on *Aedes aegypti*
William Dees, Caleb Ardizzone, Omar Christian
- P-10 Mosquitocidal activity of the essential oils from two Louisiana native plant species: *Monarda fistulosa* and *Solidago gigantean*
William Dees, Caleb Ardizzone, Nicholas DeVito, Omar Christian

Behavior/Biology

- P-11 *Wolbachia* infections in mosquitoes of Merced County, CA
Andrea Joyce, Ryan Torres, Valeria Flores, Rhiannon Jones
- P-12 Predicting interannual variation in West Nile virus risk: Is it for the birds?
Broox Boze, Sarah Paull, Mary Hayden, Andrew Monaghan, Savannah Ciardelli-Mullis, Chester Moore, Marm Kilpatrick, Nicholas Komar
- P-14 Elimination or management? Dealing with the ever-growing expansion of populations of invasive *Aedes albopictus* and *Aedes aegypti* in Southern California
Patrick Mullens, Jennifer Thieme, Quan Vong, Taylor Lura, Alfonso Melgoza, Robert Real, Tianyun Su, Michelle Brown

Disease Vector Studies

- P-15 Resistance monitoring in *Aedes aegypti* and *Ae. albopictus* in New Orleans, LA
Cynthia Harrison, Andra McClue, Friederike Bauder, Sarah Michaels, Claudia Riegel

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- P-16 Development of an environmental DNA assay to detect mosquito larvae
George Peck
- P-17 Bridging basic and applied vector research for public health: NIAID's Vector Translational Research Program
Ghiorghis Ghenbot, Adriana Costero-Saint Denis, John Pesce
- P-18 A baseline assessment of mosquito surveillance and control capabilities across the U.S.
Grace McClain, Chelsea Gridley-Smith, Jennifer Li, Oscar Alleyne
- P-19 Malaria incidence risk map for endemic region the Urabá-Bajo Cauca-Alto Sinú, Colombia
Margarita Correa, Mariano Altamiranda-Saavedra, Nelson Naranjo-Diaz, Ximena Porcasi, Carlos Scavuzzo
- P-20 *Anopheles* species and their relation to land covers in a malaria endemic region of Colombia
Margarita Correa, Juan Hernández Valencia, Daniel Rincón, Juan Sánchez Rodríguez, Stiven Quintero, Nelson Naranjo-Díaz, Alba Marín Valencia
- P-21 Understanding the factors shaping the gut microbiota structure of two Colombian malaria vectors
Margarita Correa, Priscila Bascuñán, Juan Niño-Garcia, Yadira Galeano-Castañeda, Stefani Piedrahita, David Serre
- P-22 Vector competence of northern California mosquitoes for *Dirofilaria immitis*
Rebekah Dial, Rebekah Dial, Brittany Nelms, Shaoming Huang, Kristen Holt, Tara Thiemann
- P-23 Are uninhabited houses important producers of *Aedes aegypti* mosquitoes?
Verónica Acevedo, Manuel Amador, Ryan Hemme, Gilberto Felix, Roberto Barrera
- P-24 A review of arthropod-borne disease outbreaks world-wide over the past twenty years
Veronica Stewart, Kara Ashworth, William Dees

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- P-25 Mosquito surveillance in a residential park: A six-year seasonal survey
William Dees, Kaleb McDade, Caleb Ardizzone, Dakota Johnson, Jill Hightower
- P-26 Determining comparative WNV prevalence in Lubbock County, TX, 2010-2017
Yazmeane Pena, Katelyn Haydett, Hannah Greenberg, Alexander Wilson-Fallon, Steven Peper, Steven Presley

Education

- P-27 From microbes to mosquitoes:
Undergraduate student engagement in biology
William Dees, Christopher Struchtemeyer, Caroline Hennigan, Caleb Ardizzone, Janet Woolman

Equipment

- P-28 CO₂-baited, no light CDC traps are a more sensitive West Nile virus collection method than CDC gravid traps
Kevin Caillouet, Nicholas DeLisi, Viki Taylor

Latin America

- P-05 Open-field efficacy trials of aerial ultra-low volume application of insecticides against caged *Aedes aegypti* in Mexico
Fabian Correa-Morales, Felipe Dzul-Manzanilla, Anuar Medina-Barreiro, Jose Vadillo-Sanchez, Martin Riestra-Morales, Luis Felipe Del Castillo-Centeno, Gonzalo Vazquez-Prokopec, Mike Dunbar, Pablo Manrique-Saide
- P-06 Evaluation of the effectiveness of Aqua K Othrine® (deltametrin 2%) applied with portable thermosbulizing machine for *Aedes aegypti* control in tests with interior space treatment
Josue de la Cruz, Quetzaly Siller, Jaime Thirion, Arturo Losoya, Aldo Ortega

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- P-13 Housing characteristics and environmental factors of an endemic zone for Chagas disease with unique presence of *Triatoma venosa* in Colombia
Oscar Quirós-Gómez, Piedad Agudelo, Gabriel Parra Henao, Angela Segura Cardona

Larval Control

- P-29 Comparing larvicide oils and Bti in septic ditches of southeastern Louisiana: Making the best of a stinky situation
Nicholas DeLisi, Kevin Caillouet, Viki Taylor

Management

- P-30 Insecticide resistance evaluation of *Culex quinquefasciatus* in Ruston, LA
Milena Guajardo, Mariah Scott, Broox Boze, Janet McAllister

New Product Trials

- P-31 A mechanical insecticide approach to non-chemical, low-cost mosquito control
Erin Cloherty, Xenia Caballero, Jackie Umena, Eric Guidry, Cynthia Harrison, Hilda Romero, David Stewart, Claudia Riegel

Operations

- P-32 Protecting public health by integrating vector and communicable disease control in Saint Louis County
Amanda Brzozowski

Other

- P-33 Residual activity of pyriproxyfen against mosquitoes developmental stages inhabiting catch basins in Riverside County, Southern CA
Lal Mian, Jesus Ramos, Angela Caranci, Major Dhillon
- P-34 Mosquito identification using infrared spectroscopy and chemometrics
Lamyae Sroute, Scott Huffman, Brian Byrd
- P-35 Evaluation of a sectorial approach to *Aedes aegypti* control using traditional mosquito control methods
Alan Wheeler

Wednesday, February 28, 2018

- P-36 Sepik virus
Daniel Rafael Saldaña Torres
- P-37 Development of an economical compressed CO₂-baited mosquito trap
Gregory White, Nadja Mayerle, Andrew Dewsnap, Ary Faraji
- P-38 Decreased infection and transmission of Zika virus in *Aedes aegypti* infected with an insect-specific flavivirus
Hannah Romo, Joan L. Kenney, Aaron C. Brault
- P-39 Modeling the efficacy of aerial spraying on the relative abundance of *Culex tarsalis* and *Culex pipiens*
Karen Holcomb, Robert C Reiner, Christopher M. Barker

1:45 PM – 3:15 PM* **AFTERNOON SESSIONS**
*unless otherwise noted

Disease/Vector Studies I

Moderator: **Vicki Kramer**

1:45 PM - 3:15 PM

Meeting Room: Atlanta

- 1:45 115 Co-infection with dengue and Zika virus in mosquitoes
Felicia Vazquez, John Thomas, Christopher Vitek
- 1:55 116 March temperatures predict April-May gravid trap counts in Iberia Parish, LA
David Martin
- 2:05 117 Are *Culex* mosquitoes vectors of Zika virus?
Harry Savage and Joan Kenney
- 2:15 118 Mosquito microbiome: Analysis for endemic and emerging pathogens of public health concern in Faisalabad, Pakistan
Shabab Nasir and Iqra Yousaf
- 2:25 119 *Aedes aegypti* abundance and infection rates during the 2014 chikungunya and 2016 Zika outbreaks in southern Puerto Rico
Roberto Barrera, Manuel Amador, Veronica Acevedo, Jorge Munoz

Wednesday, February 28, 2018

- 2:35 120 Re-emergence of St. Louis encephalitis virus in California
Vicki Kramer, Tina Feiszli, Robert Snyder, Kerry Padgett
- 2:45 121 Platform MI-Aedes: A cost-effective mosquito surveillance used in large-scale in Brazil
Alvaro Eiras, Amanda Freitas, Ana Paula Matos, Lucas Zanandrez, Victor Maia, Thais Rebouças
- 2:55 122 The Aedes in the vision of Brazil
Fabio Castelo Branco
- 3:05 123 Variation in mosquito species collections by trap type, 2012 to 2017
Maximea Vigilant and Mustapha Debboun

Latin American Symposium II

Organizer/Moderators: **Lee Cohnstaedt**

1:45 PM - 3:15 PM

Meeting Room: San Francisco

- 1:45 124 Evaluation of indoor residual spraying equipment to control *Aedes aegypti* in urban areas
Fabian Correa-Morales, Felipe Dzul-Manzanilla, Pablo Manrique-Saide, Wilbert Bibiano-Marín, Evaristo Morales-Ríos, Anuar Medina-Barreiro, Gonzalo Vazquez-Prokopec, Mike Dunbar
- 1:57 125 Improvements and challenges of ultra-low volume (ULV) aerial spray for mosquito control in Mexico
Griffith Lizarraga, Abraham Torres Verduzco
- 2:09 126 Characterizing the mating behavior of the malaria vector *Anopheles albimanus*
Catalina Alfonso-Parra, Sebastian Gomez, Hoover Pantoja, Viviana Velez, Fredy Ruiz, Francisco Vargas, Frank Avila

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- 2:21 127 Transstadial composition of midgut microbiota in *Anopheles albimanus* from the Colombian Pacific Region
Margarita Correa, Yadira Galeano-Castañeda, Paula Urrea, Stefani Piedrahita, Priscila Bascuñán-García, Nicola Segata, Francesco Beghini, David Serre
- 2:33 128 Evaluation of the efficacy of *Bacillus thuringiensis israelensis* and Spinosad on larval habitats of *Culex* sp. (Diptera: Culicidae) in the Pesqueria River in Santa Rosa, Apodaca, N.L., Mexico
Mara Garza-Rodríguez, Humberto Quiroz-Martínez, Adriana Flores-Suárez, María Maldonado-Blanco, Ian Quiroz-González, Violeta Rodríguez-Castro
- 2:45 129 Alpha and beta diversity of phlebotomine sand flies assemblage in a tropical forest of southern Mexico
Eduardo Rebollar-Téllez, Jorge Rodríguez-Rojas, Ildefonso Fernández-Salas
- 2:57 130 Species composition and diversity of sand flies (Diptera: Psychodidae) in two localities of the Chiapas border region of Mexico and Guatemala
Adriana Ramírez-Osorio, J. Guillermo Bond, Sergio Ibáñez-Bernal, Eduardo Rebollar-Téllez, David Moo-Llanes, José Muñoz, Carlos Marina

Unmanned Aerial Systems in Mosquito Control Symposium I

Organizer/Moderator: **Joel Buettner**

1:45 PM - 3:15 PM

Meeting Room: New York

- 1:45 131 Unmanned aerial systems (UAS) for mosquito control
TBD
- 2:15 132 Mosquito assessment and control-unmanned aerial systems (MAC-UAS) program
Joel Buettner, Scott Schon, Everardo Ortiz

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- 2:30 133 Operational use of unmanned aircraft systems (UAS) in Placer County
Scott Schon, Joel Buettner,
Everardo Ortiz
- 2:45 134 Development of UAS technologies to augment mosquito control operations at the Sacramento-Yolo Mosquito and Vector Control District
Samer Elkashef, Marty Scholl,
Ruben Rosas
- 3:00 135 How to create a drone program
Ryan Wood

**Young Professionals Symposium I:
Career Roundtable Discussions and
Panel Discussion: “The Next Big One-
Predicting and Preparing for Emerging
Disease Threats”**

Moderator: **Kristen Burkhalter**
Organizers: **Kyndall Dye-Braumuller, Sydney Crawley, Stormy Freese**

1:45 PM - 3:15 PM

Meeting Room: Chicago

- 1:45 Welcome and overview of the AMCA Young Professionals Group
Shiloh Judd, AMCA Young Professionals Committee Chair
- 2:00 Overview of the Career Roundtables and Panel Discussion, including experts introductions
Kristen Burkhalter, AMCA Young Professionals Advisor

Young Professionals will discuss career information and advice with experts from the following career paths for 15 minutes before moving on to the next table of experts. Following the roundtable portion of the symposium, the YPs will host a discussion panel.

Mosquito Control

Dina Fonseca, Rutgers University
Center for Vector Biology
Chris Lesser, Manatee County
Mosquito Control District
Isik Unlu, Mercer County Mosquito Control

Wednesday, February 28, 2018

Public Relations and Education

Dave Zazra, North Shore Mosquito
Abatement District
Sonja Swiger, Texas A&M AgriLife
Research and Extension Center
Sharon Sims, Mosquito Illness Alliance

Academia

Brian Byrd, West Carolina University
Neil Wilkinson, Florida Gulf Coast
University
Gabe Hamer, Texas A&M University

Federal/State

Bethany Bolling, Texas Department of
State Health Services
Lee Coehnstadt, USDA-ARS
Scott Crans, New Jersey Department
of Environmental Protection

Industry

Loren Cunningham, Central Life
Sciences
Wally Terrill, Clarke
Mike Nichols, Target Specialty
Products

Full biographies for all of our expert participants can
be found on the AMCA YP website
(amcayps.wordpress.com). In addition, requests for
delivery via email may be made to any YP
Committee member, or by sending an email to
AMCAYPs@gmail.com

2:00 Rotation #1
2:15 Rotation #2
2:30 Rotation #3
2:45 Rotation #4
3:00 Rotation #5

3:15 PM - 4:00 PM ***BREAK, EXHIBITS OPEN***
Exhibit Hall A

Wednesday, February 28, 2018

4:00 PM – 5:30 PM* **AFTERNOON SESSIONS**

*unless otherwise noted

Disease/Vector Studies II

Moderator: **James Muth**

4:00 PM - 5:30 PM

Meeting Room: *Atlanta*

- 4:00 137 Composition and structure of mosquito microbiota from six states in the United States
Ephantus Muturi, Doris Lagos-Kutz, Jose Ramirez, Chang-Hyun Kim
- 4:10 138 Invasive *Aedes aegypti* in southern Nevada - a new finding
James Muth
- 4:20 139 The surprising diversity and abundance of non-culicid biting flies (Diptera) in a zoo environment
Dustin Swanson, Nathaniel Kapaldo, Elin Maki, James Carpenter, Lee Cohnstaedt
- 4:30 140 St. Louis encephalitis virus-unprecedented activity in southern Nevada
James Muth and Vivek Raman
- 4:40 141 Transcriptomic evidence for *Aedes aegypti* from Florida in response to Zika virus
Liming Zhao
- 4:50 142 Updates on La Crosse encephalitis research in eastern Tennessee
Rebecca Trout Fryxell, Cassandra Urquhart, Abelardo Moncayo, Doris D'Souza, Suzanne Lenhart
- 5:00 143 Comparing commercial kit versus standard guanidine thiocyanate extraction protocols for nucleic acid extraction and purification
Phillip Sprinks and Joel Buettner
- 5:10 144 Mosquitoes of the United States Virgin Islands
Krystal Seger, Brett Ellis, Carrie De Jesus
- 5:20 145 TBD

Wednesday, February 28, 2018

New Product Trials

Moderator: **Ary Faraji**

4:00 PM – 5:30 PM

Meeting Room: San Francisco

- 4:00 146 Real-time district-wide mosquito surveillance with the Biogents BG-Counter
Mark E. Clifton and Mark Kartzinel
- 4:10 147 *Aedes aegypti* and *Aedes albopictus* response to four popular ovitraps in outdoor screen enclosures
John P. Smith and Taylor Thrall
- 4:20 148 Developing sterile insect technique (SIT) as a tool mosquito control districts can use for integrated *Aedes aegypti* control
Robert L. Aldridge, Leah Boardman, Jediah Kline, Jordan Coburn, Daniel Kline, Seth Britch, Daniel Hahn, Kenneth Linthicum
- 4:30 149 Evaluation of mosquito repellent gel
Meiling Z. Webb, McPhatte Lee, Dean Crockett, Jacob Hargrave, Mustapha Debboun, Kamlesh Chauhan
- 4:40 150 New technologies and operational research at the Salt Lake City Mosquito Abatement District
Ary Faraji, Greg White, Andrew Dewsnap, Brad Sorensen
- 4:50 151 Efficacy trials of Sumilarv 0.5g in St. Paul, MN catch basins
Kirk Johnson and Stephen Manweiler
- 5:00 152 Efficacy of In2Care® Mosquito Trap for control of *Aedes aegypti* on Captiva Island, Lee County, FL
Rachel Morreale and Jessica Berman
- 5:10 153 Duet® HD – A new adulticide formulation created specifically for aerial application
Yemi Bullen-McClain
- 5:20 154 A *Wolbachia*-based autocidal approach to control *Aedes* mosquitoes
Jimmy Mains, Corey Brelsfoard, Stephen Dobson

Wednesday, February 28, 2018

Unmanned Aerial Systems in Mosquito Control Symposium II

Organizer/Moderator: **Joel Buettner**

4:00 PM - 5:30 PM

Meeting Room: New York

- 4:00 136 Hack your drone: Mosquito surveillance and control with consumer UAS
Gregory Williams
- 4:15 155 The use of the Yamaha RMAX in operational applications of larvicides over the course of a season
Bill Reynolds, Valkyrie Kimball, Shanon Kern
- 4:30 156 How to create a drone program
J.T. VonLunen
- 4:45 Facilitated Panel Discussion
- 5:15 Question and Answer

Young Professionals Symposium II & Discussion Panel

Organizer/Moderator: **Kristen Burkhalter**

4:00 PM - 5:30 PM

Meeting Room: Chicago

- 4:00 Welcome and Introductions
- 4:15 Panel Discussion and Q&A: "The Next Big One - predicting and preparing for emerging disease threats"
Discussion Panel:
Becky Trout-Fryxell, University of Tennessee
John-Paul Mutebi, CDC
Gabe Hamer, Texas A&M University
Bethany Bolling, Texas Department of State Health Services
Wally Terrill, Clarke
- 5:15 Group Photo

5:30 PM – 6:30 PM YOUNG PROFESSIONALS SOCIAL

Van Horn

Young Professionals Social is sponsored by AMVAC

Notes

Thursday, March 1, 2018

7:30 AM – 9:00 AM

**EXHIBITS OPEN
MORNING COFFEE**

Exhibit Hall A

9:00 AM – 10:30 AM*

**unless otherwise noted*

MORNING SESSIONS

Arthropod Vector Highlights Symposium

Organizer/Moderator: **Lee Cohnstaedt**

9:00 AM - 10:30 AM

Meeting Room: San Francisco

9:00 159 Highlights in vector biology
Rajeev Vaidyanathan

9:30 160 Highlights of vector control
Michael Doyle

10:00 161 Recent news in triatomine biology,
control, and disease transmission
Kirby C. Stafford III

Integrated Tick Management Symposium

Organizer/Moderator: **Susan Paskewitz**

9:00 AM - 10:30 AM

Meeting Room: New York

9:00 162 Fighting the bite: tick-associated
disease and integrated tick
management
Kirby C. Stafford III

9:20 163 Host-targeted acaricides and landscape
modifications for control of *Ixodes*
scapularis in Wisconsin
Susan M Paskewitz and Jordan Mandl

9:40 164 Integrated management of an indoor
pest, the brown dog tick
Emma NI Weeks, Phillip E. Kaufman,
Sandra A. Allan

10:00 165 Integrated tick management for livestock
and domestic animals
Sonja L Swiger

Thursday, March 1, 2018

Pesticide Resistance and Management – From Theory to Practice Symposium I

Organizer/Moderator: **T. Steven Su**

9:00 AM - 10:30 AM

Meeting Room: Atlanta

- 9:00 166 An update on *Aedes aegypti* pyrethroid resistance and testing in the southern U.S.
Alden S Estep and Neil D. Sanscrainte
- 9:20 167 Challenges and successes of implementing urban adult mosquito control for WNV suppression in high risk areas of Orange County, CA, amid public opposition to pesticides
Laura Krueger, Robert Cummings, Amber Semrow, Kiet Nguyen, Tim Morgan, Sokanary Sun, Jerry Sims, John Drake, Larry Shaw, Mary-Joy Shaw, Lora Young, Rick Howard
- 9:40 168 Status of insecticide resistance in arbovirus vectors in China
Fengxia Meng, Cannan Shi, Yiguang Wang, Wenlong Kai, Qiyong Liu
- 10:00 169 Investigations on resistance in *Aedes vexans* (Diptera: Culicidae) field populations after 36 years of *Bacillus thuringiensis* var. *israelensis* (Bti) applications in the Upper Rhine Valley, Germany
Norbert Becker, Mario Ludwig, Tianyun Su

10:45 AM – 4:45 PM TRUSTEE/COMMISSIONER

TOUR

Off-site Event

Ticket Required

10:45 AM – 12:00 PM AMCA ANNUAL MEMBER

MEETING

Atlanta

12:00 PM - 1:30 PM* LUNCH

**on your own*

Thursday, March 1, 2018

1:30 – 3:00 PM*

AFTERNOON SESSIONS

*unless otherwise noted

Equipment/GIS

Moderator: **Derek Drews**

1:30 PM – 3:00 PM

Meeting Room: New York

- 1:30 171 Laboratory and field results from an enhanced BG-Sentinel with a mosquito wingbeat analyzer
Michael Weber, Martin Geier, Sergej Sperling, Ilyas Potamitis, Mario Boisvert, Joel Buettner, Charles Abadam, Jay Kiser, Karen Akaratovic
- 1:40 172 The Buffalo Turbine - An emergency application solution turns into routine urban larvicide
Frank Clarke
- 1:50 173 Using truck-mounted turbine engines sprayers for mosquito control
Ahn Ton, Odette Reza-Brown, Adriana Toro
- 2:00 174 Field observations from a BG-Counter used with a CDC light trap in Manatee County
Barbara Bayer and Mark Latham
- 2:10 175 BG-Counter: A very efficient multi-task tool
Mario Boisvert, Jake Hartle, Mary Sorensen, Joel Buettner
- 2:20 176 Unlock the power of your GIS: Key strengths and planned improvements
Chad Minteer
- 2:30 177 The collection and public dissemination of mosquito abundance data, a follow up
Samuel Rund, Micaela Martinez, Cynthia Lord
- 2:40 178 Real time larval production site mapping with ArcGIS
Ron Montgomery
- 2:50 179 TBD

Thursday, March 1, 2018

**Mosquito SIT: The Ground and Air
Assault Matures Symposium**

Organizer/Moderator: **Ralph Breslauer**

1:30 PM - 3:10 PM

Meeting Room: San Francisco

- 1:30 180 FAO/IAEA
Hanano Yamada
- 1:50 181 The delivery of lethal doses of
insecticide by males
Stephen Dobson
- 2:10 182 Programmatic use of Oxitec's OX513A
Friendly™ mosquitoes to combat *Aedes
aegypti*
Derrick Nimmo
- 2:30 183 Under the radar- Implementing SIT
where it really matters
Nitzan Paldi
- 2:50 184 Implementing a large-scale SIT/IIT study
in a residential setting
Steve Mulligan and Jodi Holeman
- 3:00 185 Scaling mosquito SIT for the real world,
from automated sexing through mass
distribution
Ralph Breslauer

**Pesticide Resistance and Management –
From Theory to Practice Symposium II**

Organizer/Moderator: **T. Steven Su**

1:30 PM - 3:10 PM

Meeting Room: Atlanta

- 1:30 186 Statewide results of insecticide
susceptibility testing using the CDC
Bottle Bioassay - what is next for
Florida?
Roxanne Connelly and Casey Parker
- 1:50 187 Resistance status of *Culex tarsalis* in
Sacramento and Yolo counties
Samer Elkashef, Deborah Dritz, Kara
Kelley, Marcia Reed, Sarah Wheeler,
Paula Macedo

Thursday, March 1, 2018

- 2:10 188 Resistance detection in *Culex tarsalis*:
From conventional bioassay to
molecular approach
Tara Thiemann, Bridgette Hughes,
Eva Choi
- 2:30 189 Resistance management and mosquito
control operations
Kim Hung, Melissa Snelling, Chris
Cavanaugh, Jennifer Henke,
Min-Lee Cheng
- 2:50 190 Resistance to *Lysinibacillus sphaericus*
and cross resistance to other pesticides
in field *Culex pipiens* populations
Jennifer Thieme, Tianyun Su, Greg
White, Chris Ocegueda, Taylor Lura,
Ary Faraji, Matt Ball, Min-Lee Cheng

Vector Borne Diseases Centers of Excellence Symposium

Organizer/Moderator: **Jeff Borchert**

1:30 PM - 3:00 PM

Meeting Room: Chicago

- 1:30 191 Introduction and comments
Jeff Borchert
- 1:40 240 Midwestern CoE mosquito research and
training programs for professionals
Susan Paskewitz
- 1:55 241 The interaction of Zika and dengue in
the emergence of Zika in the Americas
Derek Cummings
- 2:10 242 Pacific Southwest Center of Excellence
Chris Barker
- 2:25 243 Gulf Coast CoE mosquito surveillance,
imported cases, local transmission of
Ae. aegypti-borne arboviruses in Texas
and southeast
Chris Vitek
- 2:40 244 Northeast CoE mosquito research
training programs for professionals
Ted Andreadis

3:00 PM – 6:00 PM FREE TIME

Thursday, March 1, 2018

6:00 PM – 7:00 PM PRE-BANQUET SOCIAL
Terrace

7:00 PM - 9:30 PM BANQUET
Atlanta/New York/San
Francisco
Ticket Required

Friday, March 2, 2018

8:30 AM – 10:00 AM* MORNING SESSIONS

**unless otherwise noted; note new session room locations*

Adult Control II

Moderators: **Jane Bonds**

8:30 AM - 10:00 AM

Meeting Room: New York

- 8:30 192 Collection performance of a new CDC type trap in comparison to standard CDC miniature light traps and EVS traps in two different locations in Germany and the U.S.
Ulla Gordon, Martin Geier, Scott Gordon, Charles Abadam, Jay Kiser, Karen Akaratovic
- 8:40 193 Sustainable resident-based mosquito control using mass deployment of lethal ovitraps
Dina Fonseca and Brian Johnson
- 8:50 194 Resistance profiling of *Aedes aegypti* in Miami-Dade, FL
Rajeev Vaidyanathan
- 9:00 195 Analysis of insecticide resistance in *Culex quinquefasciatus* from Greenville, MS
Lee Noel, Milena Guajardo, Mariah Scott, Broox Boze, Kris New, Janet McAllister
- 9:10 196 Space spray applications: How do we demonstrate evidence of impact?
David Malone, Mark Latham, Daniel McDermott
- 9:20 197 Efficacy of lambda-cyhalothrin and pyriproxyfen in controlling mosquitoes in residential backyards
Chris Keefer, Phil Koehler, Robert Pereira

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- 9:30 198 Characterization of targeted swarm spraying with rechargeable handheld sprayers compared to broadcast space-spray applications via a backpack sprayer
Jane Bonds, Mark Latham, Abdoulaye Diabate, Fredros Okumu
- 9:40 199 Experimental evaluation of the effect of passive metofluthrin emanators on landing and mortality of pyrethroid-resistant *Aedes aegypti*
Mike Dunbar, Gregor Devine, Pablo Manrique-Saide, Norma Pavia-Ruz, José Vadillo-Sánchez, Evaristo Morales-Rios, Wilbert Bibiano-Marín, Anuar Medina, Gonzalo Vazquez-Prokopec
- 9:50 200 Characterization of resistance in *Aedes aegypti* (Diptera: Culicidae) from Puerto Rico: What works, what doesn't
Christy Waits, Alden Estep, Neil Sanscrainte, James Becnel

Behavior/Biology I

Moderator: **Priscilla Matton**

8:30 AM - 10:00 AM

Meeting Room: San Francisco

- 8:30 201 Interspecific competition from *Aedes albopictus* on *Culex pipiens* varies across container types in urban areas: Social drivers and disease implications
Paul Leisnham, Christopher Austin, Shannon LaDeau
- 8:40 202 Variability in mosquito midgut microbiomes
Flor Martinez, Christopher Vitek, Kristine Lowe, Erin Schuenzel
- 8:50 203 Mosquito larvae dorsal tracheal trunk physiological and morphological dimensions enabling effective acoustic larvicide
Herbert Nyberg, Samuel Rund, Paul Lisner

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- 9:00 204 Monitoring larval *Aedes albopictus* populations along an urban to rural gradient in Saint Louis, MO: Are abundance patterns driven by differences in habitat quality by land-use type?
Katie Westby, Solny Adalsteinsson, Elizabeth Biro, Kim Medley
- 9:10 205 Effects of fungal entomopathogen infection on mosquito survival and pathogen defense mechanisms
Jose Ramirez, Ephantus Muturi, Chris Dunlap, Alejandro Rooney
- 9:20 206 Results from a Massachusetts statewide survey for *Aedes albopictus* and limited control interventions
Priscilla Matton and Matthew Osborne
- 9:30 207 First record of *Culex coronator* in Virginia with a look at its recent rapid range expansion
Karen Akaratovic and Jay Kiser
- 9:40 208 Development and optimization of an environmental DNA (eDNA) approach to salt marsh mosquito surveillance
Brian Johnson and Dina Fonseca
- 9:50 209 Some like it hot? Water temperatures predict the presence of *Aedes atropalpus* and *Aedes japonicus* in southern Appalachian rock pools
Charles Sither, George O'Meara, Brian Byrd

Bridging the Gap between Research and Operation Symposium I

Organizer/Moderator: **Rui-De Xue**

8:30 AM - 10:00 AM

Meeting Room: *Atlanta*

- 8:30 210 Bringing new products to market: Collaborative efforts leading to innovative solutions in vector control
Nick Hamon

Friday, March 2, 2018

- 8:50 211 Overview of recent accomplishments in USDA-ARS National Program 104:
Veterinary, Medical, and Urban
Entomology
Ulrich Bernier
- 9:10 212 Autocidal techniques against *Aedes* mosquitoes
James Mains and Corey Brelsfoard
- 9:20 213 Mosquito and fly surveillance and control research at the USDA-ARS Center for Medical, Agricultural and Veterinary Entomology: Solving operational challenges
Kenneth Linthicum, James Becnel, Ulrich Bernier, Seth Britch, Chris Geden, Jerry Hogsette, Daniel Kline
- 9:40 214 How to square science with a well-rounded program
Steve Mulligan
- 9:50 215 Seasonal patterns of mosquitoes and other biting flies at a horse boarding facility near Cedar Key, FL
Daniel Kline

10:00 AM - 10:30 AM **BREAK**
Foyer

10:30 AM – 12:00 PM* **MORNING SESSIONS**
**unless otherwise noted*

Adult Control III

Moderator: **Daniel Dixon**
10:30 AM - 12:00 PM
Meeting Room: New York

- 10:30 216 Evaluation of two residual spray products Demand CS® and Archer® IGR for *Aedes albopictus* management in urban areas
Nicola Gallagher, Isik Unlu, Devi Suman, Yi Wang, Gregory Williams, Illa Rochlin, Kshitij Chandel, Randy Gaugler

Friday, March 2, 2018

- 10:40 217 A game changer for vector control: A novel mechanical (non-chemical) insecticide for mosquito control
Michael Roe, Charles Apperson, John Strider, Anirudh Dhammi, Jiwei Zhu, Grayson Cave, Marian McCord, Quan Shi, David Stewart
- 10:50 218 How to make adult mosquitoes do what we want using inexpensive, long lasting semiochemical blends: The case of Vectrax™
Agenor Mafra-Neto, Woodbridge Foster, Babak Ebrahimi, Elison Elieza, Leonard Mboera, Jesse Saroli, Teun Dekker, Rodrigo Silva
- 11:00 219 Surveillance and control of *Aedes aegypti* and *Aedes albopictus* in Saint Johns County
Daniel Dixon, Joseph D'Amato, Rui-de Xue
- 11:10 220 Penetration of ULV sprays at different distances into dwellings to suppress dengue vectors in urban areas
Muhammad Farooq, James Cilek, Anna Briley, Joshua Weston, Evan Sumners, Jason Fajardo, Erica Lindroth
- 11:20 221 Two plus one: The combination of two passive and one active mosquito trap may well be an *Aedes (Stegomyia)* control tool worthy of attention
Jennifer McCaw, Martin Geier, Alvaro Eiras, Scott Ritchie
- 11:30 222 Insecticide treated textiles for adult mosquito control
Helen Pates Jamet
- 11:40 223 An introduction to Fyfanon® EW, a new water-based malathion formulation for ground-based space-spray mosquito control applications
Robert Albright, Donnie Powers, Linda-Lou O'Connor, Nandita Chowdhury

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- 11:50 224 Spatial repellents on strips of camouflage netting reduce mosquito collections in a field environment
Wendy Helmey, Daniel Kline, Seth Britch, Robert Aldridge, Frances Golden, Jessika Blersch, Alec Richardson, Kenneth Linthicum

Behavior/Biology II

Moderator: John-Paul Mutebi
10:30 AM - 12:00 PM
Meeting Room: San Francisco

- 10:30 225 Bionomics and phenology of *Culiseta particeps* mosquitoes in Lake County, CA
Cassandra Urquhart, Brittany Nelms, Tara Thiemann, Michelle Koschik, Bonnie Ryan, Jamesina Scott
- 10:40 226 Overwintering survival of *Aedes albopictus* eggs in North Florida
Peter Jiang
- 10:50 227 Distribution and blood feeding preferences of *Culex pipiens* complex mosquitoes in areas of North Greece with a recent history of WNV transmission
Alexandra Chaskopoulou, Ioannis Giantsis, Michael Miaoulis
- 11:00 228 Preliminary findings on study results where adults of the U.S. native mosquito assassin, *Toxorhynchites rutilus*, were released weekly and their impact measured as population disrupter/reducer of peri-domestic, container breeding pest mosquitoes
Anita Schiller, Rudy Bueno Jr., Mary Allen
- 11:10 229 Entomological investigations following a Zika outbreak in Brownsville, TX
John-Paul Mutebi, Lorenzo Hernandez, Christopher Haggstrom, Marvin Godsey Jr, Dominic Rose, Fred Barnes, Jesus Roriguez

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- 11:20 230 Longitudinal surveillance of *Phlebotomus* and *Sergentomyia* sand fly species in Kenya, 2008-2015, and regional environmental correlates
Seth Britch, Kenneth Linthicum, Thomas Gilbreath, Derek Monthei, Elizabeth Wanjia, Joshua Bast, Jeffrey Clark, Assaf Anyamba, Radina Soebiyanto
- 11:30 231 Distinguishing populations of living *Anopheles gambiae* s.s. and *Anopheles arabiensis* using a non-invasive opto-acoustic analysis of wing beat patterns
Andreas Rose, Sergej Sperling, Ulla Gordon, Michael Weber, Matthias Geismar, Ilyas Potamitis, Pancrac Villalonga, Joao Encarnacao, Martin Geier
- 11:40 232 Development of an attract and kill device for stable flies, *Stomoxys calcitrans*, using commercially available materials
Jerome Hogsette
- 11:50 233 Identification of blood meal sources in *Aedes aegypti* in the Florida Keys
Catherine Pruszynski

Bridging the Gap between Research and Operation Symposium II

Organizer/Moderator: Rui-De Xue

10:30 AM - 12:00 PM

Meeting Room: Atlanta

- 10:30 234 Bridging the gap: Bringing in outside research to a district
Jennifer Henke and Jeremy Wittie
- 10:40 235 Achieving innovation to impact in vector control
Angus A. Spiers
- 11:00 236 Lethal ovitrap and autocidal gravid ovitrap commercialization
Michael Banfield, Alyssa Branca, Daniel Murdock, Emily Kuhns, Samantha Whiteside, Geoff Kemble

Friday, March 2, 2018

11:10 237 Collaboration and applied research
benefit to Anastasia Mosquito Control
operation

Rui-De Xue

11:20 238 Boots, bombs and bugs: Synergizing
U.S. Navy research initiatives with
operational commitments

Peter Obenauer

11:40 239 Going for gold: Academia's relationship
with operational vector control

William Walton

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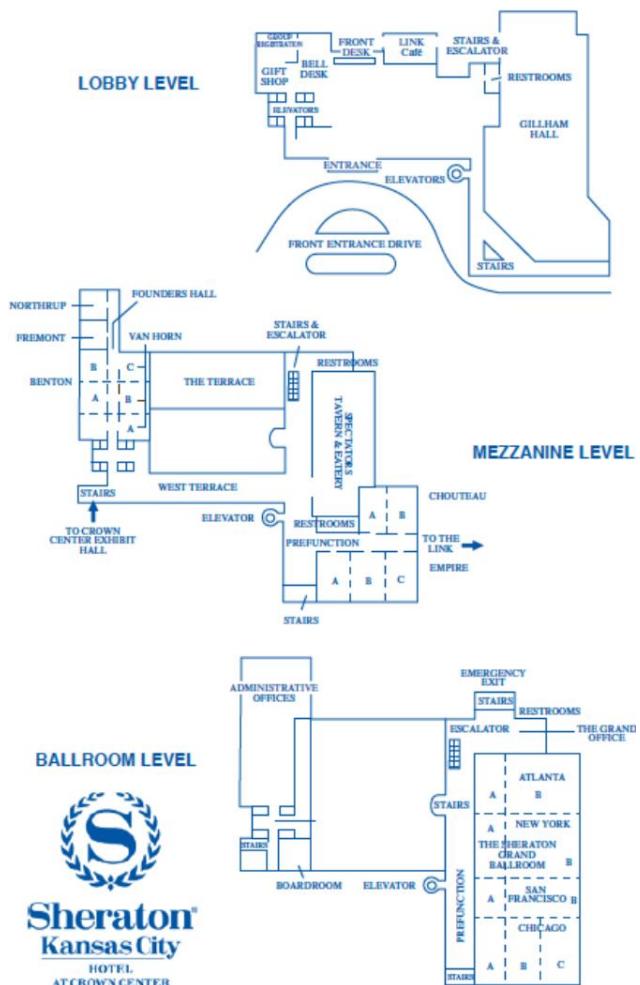
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