

ACME Newsletter Volume 2, Issue 1 October 2014



ASTMH 63rd Annual Meeting, November 2-6, 2014, New Orleans, LA

The ASTMH Annual Meeting is just a few short weeks away. As many of you are making your travel plans and polishing off your posters and oral presentations, I'd like to remind you to attend the two, back to back, ACME Symposia on November 3, 2014. Our Chair-Elect, Nicole Achee, has assembled two excellent symposia focusing on the role of medical entomology in public health advocacy. There will also be an ACME sponsored **networking** and **social time** between the two sessions.

Session 31 (1:45-3:45 pm)

Symposium I: ACME Annual Business Meeting, Student Travel Awards and Hoogstraal Medal Presentations and Networking Reception and Social Time. The keynote speaker will be Kevin J. Sweeney of the US EPA who will present a talk entitled "Key Policies Affecting Medical Entomology"

Session 44 (4:00-5:30 pm)

American Committee of Medical Entomology (ACME)
Symposium II: Voices from the Field – The Role of Medical
Entomology in Public Health Advocacy:

- Medical Entomology in Grass Roots Campaigns An Example from Ghana (Maude C. Meier)
- Medical Entomology and Private Industry Initiatives –
 Partnerships and collective action against vector-borne
 diseases from New Guinea to Central Africa (Michael Bangs)
- Medical Entomology in Shaping Government Policy An example from Mexico (Ildefonso Fernandez Salas)
- Medical Entomology in Inter-country Relations An example from Thailand and Cambodia (Wannapa Suwonkerd)

At least 40 presentations at the annual meeting will be presented by ACME members!! Please support ACME members who are presenting posters and oral presentations during the meeting by attending their sessions or stopping by their poster. See below for a list of presentations authored or co-authored by ACME members. Jennifer M. Anderson Chair, Councilor

Nicole Achee Chair-elect, Councilor

Stephen L. Dobson Past-chair, Councilor

Rebekah Kading Secretary/Treasurer, Councilor



Be sure to take a look at updates to the ACME Web site!!

http://www.astmh.org/ACME.htm

We Want You! If you are interested in learning more about serving on the council, please contact Jennifer Anderson jenanderson@niaid.nih.gov

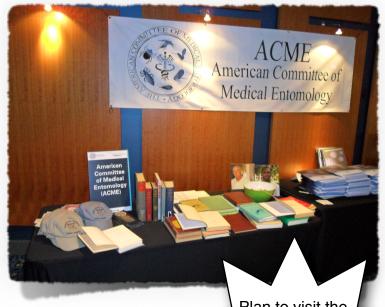


ACME Membership Survey

Please take a few minutes to complete the ACME membership survey. Click on the following link to access the survey at: https://www.surveymonkey.com/s/CMHMFQS
The information gathered from this survey will help future strategic planning.

ACME Booth at the ASTMH Meeting

Last year, through the silent auction and t-shirt/hat sale at the ASTMH meeting in Washington DC, ACME raised \$1081. Please help us to continue this tradition by donating items for the 2014 silent auction in New Orleans. Stop by the booth during the meeting and bid on an item and pick up an ACME logo hat or shirt. If you would like to donate something for the auction or sign up to man the booth, please email Jennifer Anderson at jenanderson@niaid.nih.gov. The exhibit hall will be open on Monday November 3 and Tuesday November 4 from 9:30-10:30am, Noon-1:45pm and 3:15-4:15pm and Wednesday November 5 from 9:30-10:30 am, Noon-1:30pm and 1:30-2:30pm.



Plan to visit the ACME booth during the 2014 ASTMH meeting in New Orleans, Louisiana!!



ACME Student Travel Award

ACME works to promote medical entomology within ASTMH and in organizations whose scopes of activities include the area of human diseases transmitted by arthropods. We seek opportunities to emphasize and expand the contributions of medical entomology to tropical medicine and also to appropriately recognize outstanding contributions by medical entomologists.

ACME received 44 applications for the 2014 ACME Student Travel Award. This was a 100% increase over last year's applicant pool! Due to a new financial endowment by the ASTMH parent society, we were able to fund three winners. Each awardee will receive a cash award to support their attendance at the meeting. The first place winner will present his/her work during the ACME symposium at the 2014 ASTMH Annual Meeting (November 2-6, 2014, Sheraton Hotel, New Orleans, LA).

For a list of previous award winners and additional application information, please go to the ACME website: http://www.astmh.org/ACME.htm



ACME Sponsored ASTMH Society Prestigious Medals:



The Harry Hoogstraal Medal

The nominating committee reviewed ten applicants representing the most distinguished members of the medical entomology community. The 2014 Award will be announced during the opening Plenary Session on Sunday November 2, 2014 from 5:30-7:30 pm (Marriott Grand Ballroom). For a list of previous award winners and additional application information please go to the ACME website http://www.astmh.org/ACME.htm

RENEW YOUR MEMBERSHIP!!

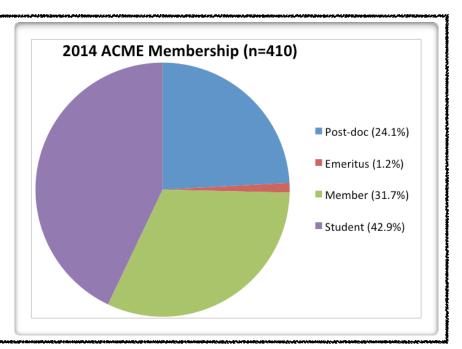
American Committee of Medical Entomology (ACME) Subgroup Membership (\$25) is available for members whose interests lie in the area of human diseases transmitted by arthropods. Your membership will help to support the annual meeting travel awards program, an awards program for outstanding achievement in medical entomology and symposia at the annual meeting.

Membership is <u>free</u> for students and post doctorates.

ACME is actively pursuing individual, foundation or corporate sponsorship to increase the number and amount of ACME Student Travel Awards. ACME sees these awards as critical for strengthening the future of medical entomology research. ACME members who are interested in such sponsorship, or who have connections with foundations or corporations that may be interested in such sponsorship are encouraged to contact: Brian Foy brian.foy@colostate.edu

Membership

ACME Membership continues to grow. In mid-2013, ACME membership was approximately 250 members. Now 410 members strong, our roster consists of 259 renewed members and 151 new members, the majority of which are student- and post-doctoral-level scientists. Thank you to those of you returning members for your continued support of ACME, and welcome new members!





Financial summary

For the period ending August 31 2014, the total net assets for all ACME funds is \$4,853. This figure includes \$3,425 in revenue from membership dues for 2014, up from \$2,880 revenue from membership dues in 2013. Apart from the ACME auction booth, which raised \$1,081 at the 2013 ASTMH annual meeting, membership dues remain the primary source of income for ACME. For expenditures, a total of \$3,072 has been budgeted for the 2014 annual meeting expenses. This figure covers symposium fees, audio/visual requirements, hotel gratuity and taxes, and

food and beverage costs. A consistent financial challenge (and goal) of ACME has been to increase support for student travel awards. This year, a grant of \$1,500 from ASTMH raised our total funds available for student travel to \$1,800, allowing ACME to support the travel of three outstanding students to the ASTMH annual meeting this year. Another ACME auction is planned for the 2014 ASTMH annual meeting to help raise funds to support ACME's activities and travel awards during 2015.

POSTER PRESENTATIONS

#104 K. Banajee/Macaluso - The effect of Amblyomma maculatum feeding on Rickettsia parkeri infection in rhesus macaques

#106 - Harris/Macaluso - Characterization of Vertical and Horizontal Transmission of Pathogenic and Nonpathogenic Rickettsia within the two tick hosts Dermacentor variabilis and Amblyomma maculatum

#109 Charles Apperson - Rickettsia species detected in *Dermacentor variabilis* in North Carolina"

#113 - Verhoeve/Macaluso - Identification of a full length transcript encoding a putative Relish-type NF-kB protein, DvRelish, in Dermacentor variabilis

#150 Brandyce St. Laurent/Jennifer Anderson - "Investigating the role of diverse anophelines in transmitting artemisinin-resistant Plasmodium falciparum in Cambodia - a challenge for malaria control and elimination

#153 Gonzalo Vazquez-Prokopec et al. "Shifting patterns of Aedes aegypti fine scale spatial clustering in Iquitos, Peru"

#200 Philip McCall - Alarm signals for dengue outbreaks: A multi-center study in Asia and Latin America

#205 Scott Huang - Characterization of a mutation in the yellow fever virus E linker region in *Aedes aegypti* mosquitoes

#298 Pharath Lim/Jennifer Anderson - In-vitro susceptibility of *Plasmodium* falciparum to eight antimalarial drugs in Cambodia. 2012-2013

#511 Nour Rashwan – Molecular diagnosis of soil-transmitted helminth infections using a novel isothermal amplification method.

#564 Dawn Wesson - Understanding the molecular epidemiology of Trypanosoma cruzi I in North America: New Orleans first approach.

#748 Matthew Leming - The circadian clock and light/dark cycle influence RNA expression in the *Aedes aegypti* mosquito

#763 Philip McCall - Evaluating the evidence for effectiveness of vector control of dengue outbreaks by systematic review and meta-analysis

#787 - Guagliardo et al. "Aedes aegypti population structure is driven by boat traffic in the Peruvian Amazon"

#776 Luc S. Djogbenou - Analysis of the DNA sequence of ace.1 gene in *Anopheles gambiae s.s*: duplication and recombination history

#792 Dawn Wesson - IgG antibody subclasses against vector salivary proteins as a measure to risk of Aedes aegypti bite exposure after implementation of attractive lethal ovitraps.

#797 - Michael Clark/Nicole L. Achee -Design and Assessment of a Mobile Database Management System for Arthropod-Borne Disease Surveillance in Belize

#800 Abdallah Samy - Rift valley fever outbreak in Saudi Arabia anticipated from

Africa outbreaks and time-specific satellite data

#861 Rebekah Kading - Arbovirus surveillance in bats in Uganda

#1324 - Macy Brusich/Nicole L. Achee -Targeting Educational Campaigns for Prevention of Vector-borne Disease: An Assessment of Rural vs. Urban Settings in Thailand

#1340 Khem BC - Depletion of Tick Thioredoxin reductase attenuates the native tick microbiota

#1344 Igor V. Sharakhov - Physical Mapping Reveals Chromosome-Specific Genomic Landscapes in *Anopheles stephensi*

#1619 Philip McCall - Increasing role of *Anopheles funestus* and *Anopheles arabiensis* in malaria transmission in the Kilombero Valley, Tanzania

#1683 Abdallah M. Samy - Mapping the potential risk of mycetoma in Sudan using Maximum Entropy Ecological Niche Modeling

#1016 Aaron Sheppard - Light-regulated blood-feeding and flight behavior and a light phase response curve for the *Anopheles gambiae* malaria mosquito

#1328 Luis Chaves - Dog serology for cutaneous leishmaniasis is associated with

sand fly vector abundance and suggests endemic transmission in rural Panamá

#1333 Amy Krystosik - Development of a novel assay to measure flight capacity of *Anopheles gambiae s.l.*

#1369 - Victor Sugiharto/Nicole L. Achee - Influence of Dengue Viral Titer on Aedes aegypti Behavioral Response to DEET

#1371 Jennifer Anderson/Brandyce St. Laurent – A quality Management System for Anopheles Insectaries in FDA-Regulated Studies in Mali.

#1374 Jefferson A. Vaughan -Comparative abilities of microfilaremic versus non-microfilaremic birds to infect *Culex pipiens* mosquitoes with West Nile virus

#1735 - Angela Caranci/Nicole L. Achee - Modeling eco-bio-social determinants for household invasion of sylvatic Triatoma dimidiata in northern Belize

#1497 Felipe Colon - A pan-African highresolution seasonal malaria forecasting system

#1735 Angela Caranci - Modeling eco-biosocial determinants for household invasion of sylvatic *Triatoma dimidiata* in northern Belize

ORAL PRESENTATIONS

#611 Sandipan Ray - Multipronged
Proteomics and Metabolomics Analysis of
Plasmodium falciparum and P. vivax
Induced Alterations in Humans to Decipher
Disease Pathogenesis and Identify
Surrogate Markers

#655 Luis Chaves - Sustainable malaria elimination on Aneityum Island, Vanuatu, 1991 -2014

#686 Keshava Mysores - iRNA nanoparticle-mediated targeting of doublesex, a regulator of sex-specific development in *Aedes aegypti*

#700 Amrish Baidjoe - Focal screening and treatment (FSAT) campaign in foci of malaria transmission: impact on malaria prevalence and complexity

#1913 Igor V. Sharakhov - An integrated chromosome, genetic linkage and genome

map for the southern house mosquito Culex quinquefasciatus

#1190 Igor V. Sharakhov - Effects of an Epigenetic Drug on Malaria Mosquitoes

#1191 - Joseph Wagman/Nicole L. Achee - Insensitivity to Spatial Repellents: A Heritable Trait?

#1911. Atasjo Sharma - Structural Divergence of Heterochromatin Between Incipient Species of *Anopheles gambiae*

#1199 Robert Flecker - Assessing the Economic Burden of Neurocysticercosis Hospitalizations in the United States, 2003-2012

#1216 Heidi Goethert - Zoonotic Babesia microti lineages do not differ from those that are locally enzootic

#1818 Julian F. Hillyer - Periostial hemocyte aggregation in *Anopheles*

gambiae occurs following diverse immune stimuli and is accompanied by changes in mosquito heart physiology

#1820 Jennifer Peterson - Parasite coinfection and strain differences as drivers of pathogenic variation in the Chagas disease parasite *Trypanosoma cruzi* when infecting its insect vector, *Rhodnius prolixus*

#1883 Josephine Parker/Philip McCall - Fly me to the plume: video-tracking analysis of *Anopheles gambiae* flight behaviour at human-baited bednets".

#1892 Sridhar Arumugam - Vaccination with Brugia malayi-103 and Brugia malayi-RAL-2 Confer Significant Protection against Subcutaneous Challenge of *B. malayi* Infective Larvae in Mongolian gerbils.

LATE BREAKER PRESENTATIONS

Vivian Padin-Irizarry - Low GSH Levels Affects Development of *P. berghei* Asexual Stages

Lattha Souvannaseng - Identification and characterization of *Anopheles* mosquito MAPK phosphatases

Pharath Lim - Decreasing pfmdr1 copy number suggests that *Plasmodium falciparum* is regaining sensitivity to mefloquine in Cambodia.

Andrea Lund - Impact of Weather Variability of Water Quality and Mosquito Productivity in Catch Basins in Atlanta, Georgia **Dawn Wesson** - A novel artificial membrane feeding system for hematophagous arthropods

Bozena Morawski - Hookworm and HIV co-infection in rural Uganda: Revisiting the case for integrated control programs

William Bryant, Kristin Michel - The Role of RAS-Signaling in Blood Meal-Induced Hemocyte Activation

Gissella M. Vasquez - Anopheline species composition and distribution in remote malaria-endemic areas in Loreto, Peruvian Amazon

^{*} Apologies if your presentation is not included in this list

ACME Subgroup (American Committee of Medical Entomology)

Council Meeting Minutes

November 13th, 2013 3:30-5:30 pm Park Tower - Room 8210 Marriott Wardman Park Washington DC

President: Stephen Dobson, PhD
Secretary/Treasurer: Amy Morrison, PhD, MSPH
Past President: Brian Foy, PhD

- 1. Call to Order (Stephen Dobson, PhD)
- 2. Introductions
 - a. Attendance

<u>Name</u>	Rotating off	<u>In</u>	Comments
		Attendance	
Kevin Macaluso	2013	Yes	
Brian Foy	2013	Yes	
Amy Morrison	2013	Yes	
Sam Telford	2014	Yes	
Jason Rasgon	2014	Yes	
Nora Besansky	2014	Yes	
Nicole Achee	2015	Yes	New chairperson-elect
Jen Anderson	2015	Yes	2014 Chair
Stephen Dobson	2015	Yes	
Lyric Bartholomay	2016	Yes	
Kristin Michel	2016	Yes	
Dan Kline	2016	No	
Rebekah Kading	2017	Yes	Attended Via Skype; new
			Secretary-treasurer
Maria Duik-Wasser	2017	Yes	
Gonzalo Vazquez	2017	No	

- 3. Introduction of Student Travel Awardee
 - a. Jennifer, Rebekah, Brian and Ellen were thanked for their hard work and serving on the selection committee
 - b. 23 applicants for the travel award

- c. Winner: Robert McCann, Michigan State, studying re-emergence of An. funestus as a malaria vector in Kenya
- d. Received \$300 stipend
- e. Discussion regarding the desire to increase the amount and/or number of student travel awards
- f. We should all help to 'get the word out' about the ACME travel award for next year
- 4. Introductions and review of incoming/outgoing councilors
 - a. Incoming (2014 2017 term)
 - i. Rebekah Kading CDC
 - ii. Maria Duik Wasser Yale University
 - iii. Gonzalo Vazquez Emory University
 - b. Outgoing 2013
 - i. Amy Morrison, Secretary/Treasurer UC Davis
 - ii. Kevin Macaluso, Past Chair Louisiana State University
 - iii. Brian Foy, Past Chair Colorado State University
- 5. Election of Chair-Elect from Candidates: Lyric Bartholomay and Nichole Achee
 - a. Vote: Nichole Achee
- 6. Election of new Secretary/Treasurer (3-year term)
 - a. Rebekah Kading volunteered, and was voted in. She will follow up with Amy Morrison about the transition of duties.
- Review of ASTMH powerpoint summary and status report (to be used at Saturday ACME business meeting)
- 8. Review of ACME Report (attached)
- 9. Treasurer report on ACME finances (Amy)
 - a. ACME budget report for period ending Nov 30, 2013: Total net assets for all ACME funds are \$2708.
 - b. Amy will facilitate transfer of duties to Rebekah
- 10. Hoogstraal Award Update (Sam)
 - a. Winner: Barry Beaty (Colorado State University)
 - b. Sam will contact rolling candidates and remind them of their ability to update their packets
- 11. Update on efforts to attract cooperate investment to ACME (Nicole and Brian)
 - a. Not much success to date but should be a continued effort
 - b. Companies may find this more attractive if their names are associated with the travel award or posted at the booth
 - c. We should inquire with the head society about the possibility of accepting donations from individuals, specifically designated for AMCA
- 12. Discussion of ACME mixer
 - a. Expensive $^{\sim}$ \$2000 for cookies we will follow up this year to see if this cost can be reduced.
- 13. Discussion of ACME booth (Jennifer)
 - a. \$987 raised at the 2012 ASTMH meeting in Atlanta, from the ACME book sale
- 14. Update on Guidance documents
 - a. Human Subjects (Nicole)
 - i. Current plans are to publish the document by mid 2014 with ongoing discussion focused on optimal journal selection.
 - b. Mosquito Releases (info from Mark Benedict attached)

- c. Proposal to update the Arthropod Containment Guidelines (Sam)
- 15. Discussion of ACME newsletter and any interest in publishing an additional newsletter
 - a. Stephen put together an excellent first edition of the newsletter in April 2013
- 16. Discussion of ACME priorities for 2014
 - a. Need to update membership list and put together a group mailing list
 - b. Continue to increase membership, improve standing within the Society, better define our role within ASTMH
 - c. ACME newsletter and other engagement tools (blog, Twitter)
 - d. Continue ACME fundraising efforts, including pursuit of corporate sponsorship
- 17. Discussion of any Committee or Subgroup initiatives that might require ASMTH Council discussion, action or approval, including budget implications
 - a. There was discussion of the ACME membership fee for members from low and middle income economies. The head society has reduced their membership fees to \$25. Currently ACME membership is also \$25. There was broad support for contacting ASTMH membership about the possibility of waiving ACME fees for qualifying applicants. This may require modification of the ACME charter. Action Item: Email Karen.
 - b. Make booth funds a separate budget line item, as well as support to students
 - c. Make a link on the website for "how to donate to ACME"
- 18. Discussion of Twitter/Blog site and other communication tools
 - a. Discussion of possible ACME activities at the 2016 ICE in Florida
 - b. April 7 2014 will be world health day... this year focusing on vectors
- 19. Cross-cutting ideas collaborating with other subgroups
- 20. New Business
 - a. Lyric brought up the issue of low turnout for the student paper competition in the entomology group. There were only about 10 paper submissions. This low turnout was attributed to the Entomological Society of America annual meeting occurring simultaneously with ASTMH this year, and many students likely chose to attend ESA due to the higher probability of giving an oral presentation. Still, it was discussed that we should encourage more students to apply for the ASTMH student award, and remind post-doctoral researchers that up to 2nd year post-docs can submit abstracts.
- 21. Adjournment