



# ACAV Newsletter

## ACAV Executive Council Members

Christopher Mores – Chair  
Greg Ebel – Past Chair  
Kathryn Hanley – Secretary  
Scott Weaver – Treasurer  
Don Burke – Historian  
Rebecca Rico-Hesse – Councilor  
Michael Drebot – Councilor  
Brad Blitvich - Councilor  
Aaron Brault - Councilor  
Nikos Vasilakis - Councilor  
Kathryn Hanley - Chair elect

Elections for new councilors will be held this summer – watch for the notice!

## Individual Highlights:

ACAV statement on chikungunya virus	2
ACAV Awards	3
Books of interest	4
Get involved	4
Upcoming conferences	5
Feature Story (ACAV and ebola)	6

## ACAV Mission...

The American Committee on Arthropod-Borne viruses (ACAV) was born in the 1960's to emphasize that arthropod-borne viruses represented a recognized field of effort and that both organized groups and regional laboratories would be involved in addressing the problems associated with arboviruses. ACAV activities would not be

limited to news from the United States; it would collect information from all over the world from anyone who wanted to submit information. Meetings would be held in association with major international and national meetings of scientists concerned with virological and tropical disease research. This would allow arbovirologists to be

kept up to date on what was going on.

As a subgroup within ASTMH, ACAV provides a forum for the exchange of scientific information among people interested in the study, prevention and treatment of arboviruses. Arbovirus research focuses on viruses transmitted by arthropods (mainly ticks and mosquitoes).

## ACAV subcommittees – a way to get involved with your areas of interest

There are a number of ACAV subcommittees that focus on distinct areas of interest to the arbovirology community. Current committees and their chairs are listed below. Contact information is provided for further information on each group's activities.

**Subcommittee on Arbovirus Laboratory Safety (SALS)**  
Tom Ksiazek [tgksiaze@utmb.edu](mailto:tgksiaze@utmb.edu)

**Subcommittee for Evaluation of Arthropod-Borne Status (SEAS)**  
Michael Turell [michael.j.turell@us.army.mil](mailto:michael.j.turell@us.army.mil)

**Subcommittee on Information Exchange (SIE)**  
Ann Powers [apowers@cdc.gov](mailto:apowers@cdc.gov)

**Subcommittee on Inter-relationships Among Catalogued Arboviruses (SIRACA)**  
Scott Weaver [sweaver@utmb.edu](mailto:sweaver@utmb.edu)

**Subcommittee on Low Passage Viruses (SLPV)**  
Robert Tesh [rbtesh22@gmail.com](mailto:rbtesh22@gmail.com)

## 'Explosive' Chikungunya Virus Likely To Spread; Reminder of Critical Research Needs



*ACAV members in action  
Lyric Bartholomay setting  
a CDC light trap*

*ACAV released the following statement based on a document prepared regarding the introduction of chikungunya virus into the Caribbean:*  
December 30, 2013—

Recent reports of what is believed to be the first-ever local transmission of chikungunya virus (CHIKV) in the Caribbean edges the Western Hemisphere closer to the possibility of an explosive outbreak of this mosquito-transmitted disease. The virus has a record of spreading rapidly – a 2004 outbreak on Kenya's Lamu Island sickened ~ 75 percent of the local population. Based on its rapid dissemination throughout the Indian Ocean region and into other parts of the world, CHIKV is likely to take root in the tropical Americas, further

burdening people, A great health systems and already-strained economies.

CHIKV results in painful, debilitating symptoms, including severe arthritis and swelling of the tissues surrounding the joints. Treatment can be costly; in some cases, infected individuals have required hospitalization for a week. Many patients are incapacitated for several weeks – sometimes months – with severe joint pain.

Several other arthropod-borne viruses of public health significance are present in the Americas, including dengue virus, West Nile virus, Eastern Equine encephalitis virus, Powassan virus and Heartland virus. CHIKV's emergence in the Western Hemisphere serves as an important reminder of the ability of these viruses to spread and emerge in new

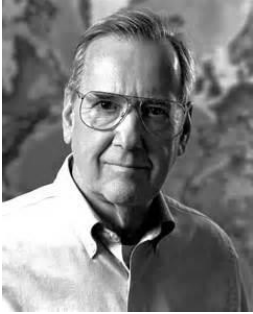
areas, and that the U.S. government and other donors must sufficiently support tropical medicine research, including research on neglected and understudied arboviruses. The U.S. is currently poorly positioned to respond to new and existing arboviral threats. Moreover, given the increasing number of cases and worsening outlook for control of most arboviruses, it is critical that the U.S. maintain a vigorous research program in order to train and maintain a cadre of scientists and public health workers with the expertise and insight to respond to new threats in an integrated and cooperative manner. ASTMH is actively making the case for adequate research funding for these and other tropical medicine concerns.



*Desiree LaBeaud, Monica Singer and local school children, Mililani, Kenya, Africa*

# ACAV Awards

## Robert E. Shope International Fellowship in Infectious Diseases



Robert E. Shope, MD (1929 – 2004) devoted his career to the study of viruses carried by mosquitoes, ticks and other biting insects. One of the world’s foremost authorities on insect-borne viruses, he discovered and characterized more previously unknown viruses than any other person in history. He was often called a “walking encyclopedia” of viruses, who made major contributions to the understanding of infectious diseases and the promotion of global health. His lifelong contributions to our understanding of arthropod-borne viruses, hemorrhagic fever viruses and the diseases these viruses cause are without equal.

The Robert E. Shope International Fellowship in Infectious Diseases provides support for international training opportunities in arbovirology and emerging diseases for those with an MD, DVM, PhD or related doctoral degree.

ACAV is very proud of this extremely prestigious award and encourages all membership to identify qualified candidates and recommend that they apply. This is a wonderful chance to showcase the abundance of outstanding research honoring Bob’s memory within ACAV’s membership. ASTMH sent out application details for the next Robert E. Shope Fellowship Award on 3/12/15 – be sure to check your email or the ASTMH/ACAV website. The deadline for applications is May 6, 2015.

## Career Stage Awards

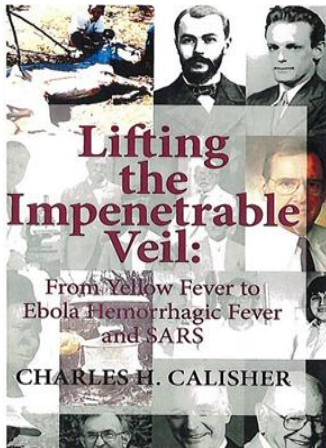
The ACAV presents three career stage awards. The chair of the executive council appoints a nominating committee for each award. Recipients of awards are selected by the executive council. This procedure provides the nominating committee with nominations and documentation from ACAV members.

1. The **Dalrymple/Young Award** is given every three years to a mid-career investigator (typically  $\leq 50$  years of age) who has made outstanding contributions to arbovirology.
2. The **Richard M. Taylor Award** is given every three years to a person who has made outstanding contributions to arbovirology throughout his or her career.
3. The **Scherer/Hardy Award** is given up to annually to an outstanding doctoral graduate either before graduation or up to three years post-graduation. Read more about William F. Scherer and James L. Hardy.

***In 2015***, 2 awards will be given: the Richard M. Taylor Award and the Scherer/Hardy Award. Requests for nominations for these awards will be sent out this spring so be on the lookout for the announcements! *Please* do nominate those worthy individuals for these awards – there is really minimal work involved. We have so many deserving ACAV members that should be recognized for their lifetime of contributions and their potential to contribute in the future.

**ACAV Travel Awards** - The ACAV student/post-doc travel awards are presented by the ASTMH’s American Committee on Arthropod-Borne Viruses (ACAV) to up to five individuals each year. Applicants must be either graduate students or post-doctoral fellows who are actively conducting arbovirus research. Recipients will be awarded a complimentary meeting registration and \$500.00 to defray costs associated with attending the meeting. Watch for the announcement for 2015 travel awards!

## ***Books by ACAV members***



“Lifting The Impenetrable Veil:  
From Yellow Fever To Ebola  
Hemorrhagic Fever And SARS”

by Charles H. Calisher, Ph.D.

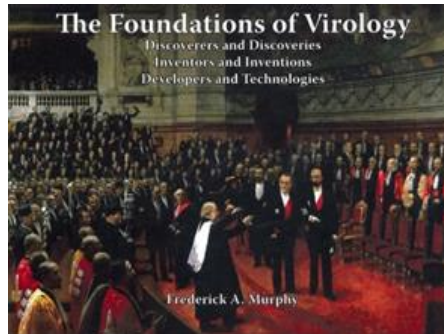
Available for sale from Amazon  
<http://www.amazon.com/dp/061582773X>

### **ACAV needs you...**

ACAV needs your help to provide information of importance to the membership. This newsletter will have sections for positions available (faculty, post-doctoral fellows, training opportunities, etc.), books of interest, updates on meetings, and anything relevant to the modern arbovirologist. We need you to send items that should be shared. If you have material you'd like included in the next edition of the newsletter, please send it to [apowers@cdc.gov](mailto:apowers@cdc.gov) .

### **Artistic?**

If you are creative and want to put your artistic talent to use for ACAV, we are looking for a new logo. The design will be part of our website, newsletter, and any future items ACAV may generate. Send your design to the SIE team.



“The Foundations of Virology  
Discoverers and Discoveries  
Inventors and Inventions  
Developers and Technologies

By Frederick A Murphy, DVM,  
PhD.

Available for sale from  
Infinity Publishing:  
<http://www.buybooksontheweb.com/product.aspx?ISBN=0-7414-7365-8>

Amazon:  
<http://www.amazon.com/The-Foundations-Virology-Frederick-Murphy/dp/0741473658>



*Julian Garcia-Rejon,  
Cozumel Island,  
Mexico*



**Ildfonso Fernandez-Salas & colleagues,  
Acapulco, Mexico**

## Upcoming conferences/meetings of interest - 2015

How Modeling Can Inform Strategies to Improve Population Health: A Workshop  
<http://www.iom.edu/Activities/PublicHealth/PopulationHealthImprovementRT/2015-APR-09.aspx>; April 9, 2015; Washington, DC

31st ASM Clinical Virology Symposium  
 April 26 - 29, 2015  
 Daytona Beach, Florida

American Association of Immunologists AAI  
<http://www.aai.org/>  
 May 8-12, 2015; New Orleans, LA

Keystone Symposium  
 The Arthropod Vector: The Controller of Transmission (E2)  
 May 12 - 17, 2015 | Taos, New Mexico, USA

International Forum for Surveillance and Control of Mosquitoes and Mosquito-borne Diseases  
<http://www.mosquitoforum.net/EN/volumn/home.shtml>; May 25-29, 2015; Guangzhou, Guangdong, China

ASM 2015  
 115th General Meeting  
 May 30 - June 2, 2015  
 New Orleans, LA

American Society for Virology Annual Meeting  
<http://www.asv.org/>  
 July 11-15, 2014  
 London, Ontario, Canada

International Conference on Diseases in Nature Communicable to Man (INCDNCM),  
<https://sites.google.com/site/incdncm/Home>.  
 August 9-11, 2015 at the NIH Rocky Mountain Laboratories in Hamilton, Montana.

The International Conference on Emerging Infectious Diseases ICEID  
<http://www.iceid.org/>  
 August 24-26, 2015, Atlanta, GA

European Congress on Tropical Medicine and International Health ECTMIH  
<http://www.ectmihbasel2015.ch/> Sept 6-10, 2015; Basel, Switzerland

ICAAC  
<http://www.icaac.org/>  
 September 17-21, 2015, San Diego, CA

ASM Rapid Next-Generation Sequencing and Bioinformatic Pipelines for Enhanced Molecular Epidemiologic Investigation of Pathogens  
 September 24 - 27, 2015  
 Washington, DC

Society for Vector Ecology  
<http://www.sove.org/>  
 September 27-October 1, 2015, Albuquerque, New Mexico

Infectious Disease Society of America IDSA  
<http://www.idweek.org/> October 7-11, 2015, San Diego, CA

ASTMH  
<http://www.astmh.org/>  
 October 25-29, 2015  
 Philadelphia, PA

We're on the Web!

See us at:

<http://www.astmh.org/ACAV.htm>

## *ACAV members help with the ebola outbreaks*

A large number of our ACAV members have recently been involved in helping with the ebola crisis in West Africa. While there are too many stories to cover them all, our 2015 ACAV Chair, Christopher Mores, recently returned from working in Sierra Leone and shared his thought on how an arbovirologist saw the work. His story is below (as written by ACAV member Rebecca Christofferson).

Maybe it's the many long nights in the lab taking heads and legs off of mosquitoes, but arbovirologists are good at disassembling things. Specifically, we are really good at disassembling transmission: vector, vertebrate, zoonoses, anthroponotic, urban, sylvan. Each of these words takes transmission and divvies it up for specific questions and each set of questions can be further disassembled into smaller and smaller elements. Some of us concentrate on the introduction of virus to vertebrate by vector; others investigate the opposite. Still others only investigate the urban cycles while others concentrate on the sylvan. And then there are the nuances of the infections within the vertebrate and vector that are divided into cell types and immune responses and competence timing.

Because of this, arbovirologists are uniquely positioned to ask insightful questions about transmission when there are more questions than answers, such as the recent Ebola virus (EVD) outbreak in West Africa. Dr. Christopher Mores, current Chair of ACAV and Associate Professor at Louisiana State University recently traveled to West Africa as the infection control specialist and epidemiologist for GOAL Aid Ireland. GOAL constructed and staffed an Ebola treatment center (ETC) in Port Loko, Sierra Leone, about 70 km from the urban capital of Freetown. In his time there, Dr. Mores was tasked with tackling some of the challenges faced in the tracking and controlling of transmission by using his experiences as an arbovirologist.



“Since my research has focused on arbovirus transmission, I am used to thinking of a process with many moving parts,” Mores said. These moving parts, he continued, included the unknown behavioral component of a dispersed and varied human population. The thinking involved in tracing the contacts of a recent patient from the ETC to the several villages visited was not unlike the thought process for disassembling differential vector contact in urban centers like Miami. Obviously, there are differences. For example, Miami has nicer bridges (Picture at left).

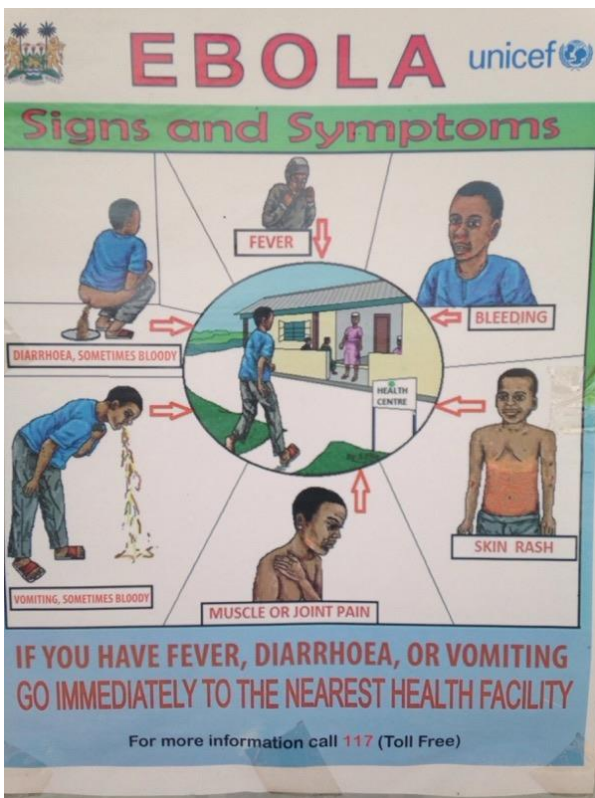
Another advantage stemming from his experience as an arbovirologist both in academia and in practice (he directed the arbovirus surveillance program at the Massachusetts Department of Health), is the ability to talk to an array of educational and social backgrounds simultaneously. “I think being in a field such as arbovirology where you have these types of conversations- sometimes in very technical terms and sometimes with non-technical stakeholders- I was better prepared to switch back and forth depending on the needs of my audience at that time.” For example, Dr. Mores’ day would often involve training local surveillance officers in case investigation, international clinicians on infection control and proper PPE use,

and then meeting with officials from the Sierra Leonean government as well as international aid organizations such as GOAL, WHO, and UNMEER to discuss operations and develop policies.

When dissecting an outbreak, arbovirologists naturally start looking for less obvious components of the transmission systems. Reservoirs? Bridge vectors? Differential contact resulting from seasonal or temporal effects? So his suspicions were aroused when while investigating an urban hotspot of ebola, Dr. Mores noticed an enormous bat roost in the vicinity (Picture at left). To date, EVD has not been isolated from a flying fox, which is purported to be the sylvatic reservoir of EVD in West Africa. Still, this outbreak had to emerge from some non-human source, so surveillance of possible enzootic transmission cycles is likely to become a focus of future attention for the ebola response.



Dr. Mores continues to work in Sierra Leone with GOAL, and currently with the Ministry of Health and the US CDC to implement an ebola vaccine trial in areas of the country with the greatest disease incidence.



*THANKS to all the ACAV members who are so generously helping out with these efforts.*