

WINTER NEWSLETTER 2009-2010

Tick-borne Infections



Council of North Carolina, Inc

Highlights...

Scroll down to see these features and more!

- **Headline in the Raleigh News & Observer:** Lyme disease found in Wake
TIC-NC met with state officials regarding follow-up actions
- Dr. Piesman, Chief of Tick-Borne Diseases Activity at the Bacterial Diseases Branch, Division of Vector-Borne Infectious Diseases/CDC, will be attending a state meeting May 21. Details below. The public is welcome to attend.
- TIC-NC will have booth at Shakori Hills Music Festival
- Virginia has introduced Lyme disease legislation
- Notes from an invitational CDC Vector-borne meeting in November
- The Institute of Medicine is holding a workshop on Lyme Disease and Other Tick-Borne Diseases: The State of the Science at the Institute of Medicine funded by the NIH. TIC-NC has nominated a scientist for the planning committee.

STATE VECTOR-BORNE DISEASE TASK FORCE MEETING SCHEDULE

In 2010 the Vectorborne Task Force meeting dates are:

- May 21st, 2010, from 10 AM to 12 PM at the main DENR offices at 2728 Capital Blvd in Northeast Raleigh, in the Division of Environmental Health Training Room. Enter the building front entrance, check in with the guard, turn left down the hall, and you'll see the room on the right. The date was changed from April 30 to May 21 since **Dr. Piesman, Chief of Tick-Borne Diseases Activity at the Bacterial Diseases Branch, Division of Vector-Borne Infectious Diseases/CDC will be attending.** He is a leading expert on ticks and tick borne diseases and this will be a great opportunity for all of us to meet him and ask questions of interest.
- Jul 30, Cardinal Conference Room, 5605 Six Forks Road, building 3
- Oct 15, Cardinal Conference Room, 5605 Six Forks Road, building 3 Each meeting is on Friday and will meet from 10 AM until 12 PM at the main DPH offices on Six Forks Road.

Each meeting is on Friday and will meet from 10 AM until 12 PM at the main DPH offices on Six Forks Road. The meetings are open to the public.

STATE CONFIRMS LYME DISEASE MAY BE ACQUIRED HERE

Lyme disease found in Wake: The state Department of Health and Human Services said Wednesday that in 2009 two cases of the tick-borne disease were found in patients who had not left the county during the 30 days before they contracted the infection. Four similar cases were confirmed in the state last year, health officials said: one each in Wilkes, Wilson, Pitt

and Carteret counties. Read more: <http://www.newsobserver.com/2010/03/18/394678/lyme-disease-found-in-wake.html#ixzz0iXGerSxU>

To be counted persons much have met very strict criteria:

- exposure to tick habitat (brushy or woody area), known bite not required
- must have developed symptoms within 30 days of this
- must not have traveled out of his/her county within these 30 days
- must have had an *erythema migrans* rash
- must have tested positive by the two-tiered test as described by the CDC



Wake County was immediately declared endemic for Lyme disease by the state. TIC-NC met with state public health officials to discuss follow-up actions, especially notification of the state's medical providers.

REVISED STATE BROCHURES ON TICK-RELATED TOPICS

The state has recently revised their tick-related brochures. Another revision is due soon. They

can be accessed at: <http://www.deh.enr.state.nc.us/phpm/brochures.htm>

TIC-NC WILL HAVE ITS ANNUAL BOOTH AT THE SHAKORI HILLS MUSIC FESTIVAL IN CHATHAM COUNTY IN APRIL

TIC-NC is having its annual booth at the Shakori Hills Spring Festival this month starting Thursday, April 22nd - Sunday, April 25th. For further festival information, see this site: <http://www.shakorihills.org/vendor-info/>

Come see us. If you are interested in volunteering at the booth contact: Faye Orr forr@nc.rr.com 545-0092

CHATHAM COUNTY HEALTH DEPARTMENT BLOG

Chatham County, NC wants to hear from you--send your comments about your experience with ticks and tick-borne infections.

The Chatham County Public Health Department has a new blog. This has a different look and name. The new blog address is <http://chathampublichealth.com/>. The purpose of the blog is to open up communication with the public. The blog will feature information on health department programs, events, and general public health news. The health department would like to hear from you.

EXCELLENT REVIEW ARTICLE ON TICK-BORNE INFECTIONS

The Canadian Entomologist, Volume 141, Number 6, November/December 2009, p. 521-549.

<http://pubservices.nrc-cnrc.ca/rp-ps/absres.jsp?jcode=ent&ftl=n08-CPA04&lang=eng> or <http://tinyurl.com/yb8j7um> This article is "Open Access" and a full text pdf file is now available.

Abstract

Lyme borreliosis (LB), also known as Lyme disease, is emerging as a serious tickborne illness across Canada. More than three decades of research on LB in North America and Europe have provided a large, complex body of research involving well-documented difficulties at several levels. However, entomologists are well situated to contribute to resolving some of these challenges.

The central pathogen in LB, the spirochete *Borrelia burgdorferi* Johnson et al., includes numerous genospecies and strains that are associated with different disease symptoms and distributions. The primary vectors of LB are ticks of various *Ixodes* Latreille species (Acari: Ixodida: Ixodidae), but questions linger concerning the status of a number of other arthropods that may be infected with *B. burgdorferi*

but do not transmit it biologically.

A variety of vertebrates may serve as reservoirs for LB, but differences in their ability to transmit LB are not well understood at the community level. Persistent cystic forms of and immune system evasion by *B. burgdorferi* contribute to extraordinary challenges in diagnosing LB. Multiple trade-offs constrain the effectiveness of assays like ELISA, Western blot, polymerase chain reaction, and microscopic visualization of the spirochetes. Consequently, opportunities abound for entomologists to contribute to documenting the diversity of the players and their interactions in this devilishly complex disease.

VIRGINIA HAS INTRODUCED LYME DISEASE LEGISLATION

A Virginia Delegate has introduced legislation this session designed to help doctors treat Lyme Disease, without fear. Delegate Tom Rust's bill would allow long term therapy, and specifies that doctors cannot face disciplinary action solely for prescribing it.

HOUSE BILL NO. 512

Offered January 13, 2010

Prefiled January 12, 2010

A BILL to amend the Code of Virginia by adding a section numbered [54.1-3408.2](#), relating to long-term antibiotic treatment for Lyme disease.

Patron-- Rust

Committee Referral Pending

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding a section numbered [54.1-3408.2](#) as follows:

§ [54.1-3408.2](#). Prescription for long-term antibiotic use for Lyme disease.

A. A licensed physician may prescribe, administer, or dispense long-term antibiotic therapy to a patient for a therapeutic purpose that treats such infection upon making a clinical diagnosis that such patient has Lyme disease or displays symptoms consistent with a clinical diagnosis of Lyme disease, provided such clinical diagnosis and treatment are documented in the patient's medical record by such licensed physician. The Board of Medicine shall not initiate a disciplinary action against a licensed physician and such physician shall not be subject to disciplinary action by the Board of Medicine solely for prescribing, administering, or dispensing long-term antibiotic therapy to a patient clinically diagnosed with Lyme disease, provided such clinical diagnosis and treatment has been documented in the patient's medical record by such licensed physician.

B. Nothing in this section shall be construed to grant any person immunity from investigation or disciplinary action for any other violation of this title.

C. The authority granted in this section to prescribe, administer, and dispense antibiotic therapy shall also apply to other tick-borne infections.

D. For the purposes of this section:

"Long-term antibiotic therapy" means the administration of oral, intramuscular, or intravenous antibiotics, singly or in combination, for periods of time in excess of four weeks.

*"Lyme disease" means the clinical diagnosis by a licensed physician of the presence in a patient of signs or symptoms compatible with acute infection with *Borrelia burgdorferi*; or with late-stage or persistent or chronic infection with *Borrelia burgdorferi*; or with complications related to such an infection or such other strains of *Borrelia* that are recognized by the National Centers for Disease Control and Prevention as a cause of Lyme disease. Lyme disease includes an infection that meets the surveillance criteria set forth by the National Centers for Disease Control and Prevention, and other acute and chronic manifestations of such an infection, as determined by a licensed physician pursuant to a clinical diagnosis that is based on knowledge obtained through medical history and physical examination alone or in conjunction with testing that provides supportive data for such clinical diagnosis.*

NEWS FROM NOVEMBER CDC INVITATIONAL VECTORBORNE MEETING

(We have not used this spray. It is claimed to be effective against mosquitoes and ticks. This information is included for informational purposes only.)

New prevention tools: BioUD Spray

- 2-undecanone (7.75%)
- Developed by R.M. Roe of North Carolina State University from wild tomato plants
- Registered by the EPA (2007) for use on human skin and clothing



- Effective against mosquitoes and ticks

New information from the CDC on Rocky Mountain spotted fever: name will change

Numerous factors are likely influencing contemporary increases in RMSF and other tick-borne diseases.

- True increases in incidence
- Cross-reactive agents
- Changes in testing
- Changes in case definitions
 - National surveillance data provide useful tools to monitor geographic and demographic trends.
- Limitations of these systems need to be considered.
 - MMWR to start publishing confirmed/probable RMSF cases in annual summary.
 - Approved by CSTE for 2009: Name of reporting category will change to **Spotted**

NEW RICKETTSIAL DISEASE IDENTIFIED

Rickettsia 364D: A Newly Recognized Cause of Eschar-Associated Illness in California

Shapiro MR, Fritz CL, Tait K, Paddock CD, Nicholson WL, Abramowicz KF, Karpathy SE, Dasch GA, Sumner JW, Adem PV, Scott JJ, Padgett KA, Zaki SR, Ereemeeva ME.

Clinical Infectious Diseases, 2010 Feb 15;50(4):541-8.

<http://dx.doi.org/10.1086/649926>

Four spotted fever group rickettsiae (SFGR) are known to infect humans in the United States. A member of the SFGR designated 364D and detected in *Dermacentor occidentalis* ticks has not previously been identified as a human pathogen. An 80-year-old man from a rural northern California community presented with an eschar on his forearm. Four other patients were also studied. Convalescent sera from all four patients exhibited high immunoglobulin G titers to *Rickettsia rickettsii*, *Rickettsia rhipicephali*, and 364D antigens. Three adult *D. occidentalis* were positive for 364D, *R. rhipicephali*, and an unidentified *Rickettsia* species.

This is the first confirmation of human disease associated with the SFGR 364D, which was likely transmitted by *D. occidentalis*. The full spectrum of illness associated with 364D has yet to be determined. Possible infection with 364D or other SFGR should be confirmed through molecular techniques in patients who present with "spotless" Rocky Mountain spotted fever or have serum antibodies to *R. rickettsii* with group-specific assays.

INSTITUTE OF MEDICINE HOLDING A MEETING ON THE STATE OF SCIENCE OF LYME DISEASE AND OTHER TICK-BORNE DISEASES

The study director for the Committee on the Lyme Disease and Other Tick-Borne Diseases: The State of the Science at the Institute of Medicine is: Christine M. Coussens, Ph.D, Senior Program Officer, Board on Population Health and Public

Health Practice, Institute of Medicine
500 5th St, NW Washington, DC 20001 tel (202) 334-2521 fax (202) 334-2939
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As of March 12, 2010 the IOM reports: The start date for this project was this past Monday and we are in the nomination process for the committee to plan this workshop. Once we have a committee in place, there will be a meeting of the committee to hear the charge and to listen to stakeholder input. After the committee has an opportunity to meet, we will have additional information on the dates, place, and content for the fall workshop.

Starting next week, we will have a web site up where interested groups and individuals can see the committee charge and subscribe to a list serv. As information becomes available (committee membership, first meeting date, agenda for the workshop, etc), we will post information to the web site and also send an e-mail to the list serv. This will let everyone know when new content has been posted to the site. The web site will be at www.iom.edu. If you check under activities and search for Lyme disease, the site should be up by Tuesday.

TIC-NC nominated a scientist for the planning committee. Unfortunately, his nomination was not accepted.

HIGH SCHOOL STUDENT WORKING ON AN EARLY DETECTION TEST FOR LD

Student's research paper on Lyme disease ranks nationally Thomas Jefferson High senior a finalist in annual Intel Science Talent Search
by Holly Hobbs, Staff Writer, Fairfax County Times, Reston, Virginia

February 2, 2010 <http://www.fairfaxtimes.com/cms/story.php?id=1021>

A high school senior's research paper on Lyme disease is getting national recognition for proposing a method of early detection that cuts diagnosis time from a month to mere minutes. "We're going to develop a new diagnostic test so that we can detect it earlier and more accurately," said Temple Douglas, 18.

*Tick-Borne Infections Council of North Carolina is a non-profit organization formed to improve the recognition, treatment, control, and understanding of tick-borne diseases in North Carolina.
We are all-volunteer and appreciate donations.*

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It is the responsibility of you as an individual to evaluate the usefulness, completeness or accuracy of any information you read and to seek the services of a competent medical professional of your choosing if you need medical care.

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