OUR COMMUNITY: *OUR WORLD:* *ONE HEALTH*

One Health Intellectual Exchange Group (IEG) – Monthly Discussions

A discussion series, sponsored by the **North Carolina One Health Collaborative** within the North Carolina Biotechnology Center's Intellectual Exchange Group (IEG) Program to enhance collaborations between physicians, veterinarians, researchers and other local/global/environmental health professionals by increasing public awareness of the interconnectedness of people, animals and the environment.

Tuesday, July 24, 2012

5:45 – 7:30 p.m.

"The Challenge of Lyme Disease in the South"

Paul Lantos, MD, Duke University School of Medicine, Division of Pediatric Infectious Diseases

and

"Will the Changing Ecology of Ticks Influence the Occurrence of Lyme Disease in the Southeastern US?"

Charles Apperson, PhD, Professor Emeritus, North Carolina State University Department of Entomology

Meets at the North Carolina Biotechnology Center
15 T.W. Alexander Drive Research Triangle Park, NC 27709
Directions: www.ncbiotech.org/directions/

Suggestions? Ideas? Contact Cheryl Stroud, NC OHC Steering Comm. Chair cms7earth@gmail.com
Add yourself to the listserve with Listserv Manager Liz Selisker, liz_selisker@ncsu.edu
Scroll down for Speaker Bio's, Suggested Readings, Cancellation notices and additional background
Or visit
http://nconehealthcollaborative.weebly.com/index.htm http://onehealtheducation.blogspot.com/

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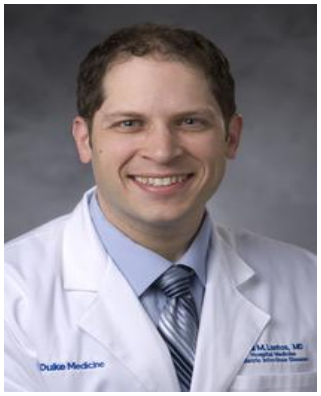

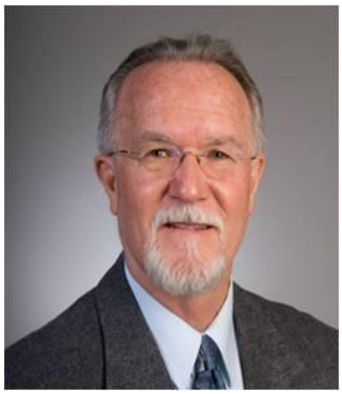

Dr. Paul Lantos

Dr. Charles Apperson

Bio: Charles Apperson is William Neal Reynolds Distinguished Professor Emeritus in the Dept. of Entomology at North Carolina State University. Apperson is a vector biologist with research interests focused on the ecology, behavior and control of arthropods of public health importance. He has 35 years of experience in researching the eco-epidemiology of tick and mosquito-transmitted diseases, such as Lyme disease, Rocky Mountain spotted fever, and La Crosse encephalitis. http://www.cals.ncsu.edu/entomology/apperson/

Overview of Dr. Apperson's Presentation: Lyme disease is a tick-transmitted illness of increasing concern in the southeastern US. The ecology of the tick vectors and Lyme disease pathogens in the south will be briefly reviewed. Results of ongoing research to characterize the tick species biting outdoor workers in NC will be presented. A comparative study of the microbiome of the tick vector, Ixodes scapularis, in NC, NY and CT will be briefly summarized.

Bio: Paul Lantos is Attending Physician in Pediatric Infectious Diseases and Hospital Medicine at Duke University Medical Center, and Medical Instructor in Internal Medicine and Pediatrics at Duke University School of Medicine. Dr. Lantos completed his medical education and residency at the University of Connecticut and his fellowship in infectious diseases at Harvard Medical School and Boston Children's Hospital, where he gained considerable experience managing patients with Lyme disease. He has been researching vector-born diseases, including human babesiosis, Lyme disease, and malaria, since the late 1990s. Dr. Lantos' current research includes modeling studies of appropriate clinical practices for Lyme disease in low endemicity settings, and geospatial research looking at surrogates of human Lyme disease risk in the South. Dr. Lantos was a member of the IDSA Lyme disease guidelines review panel and lead author of their 2010 report.
http://medicine.duke.edu/faculty/details/0484715

Overview of Dr. Lantos' Presentation: The diagnosis of Lyme disease is a particular challenge in the southern United States where there is a very low, but dynamic risk of contracting the infection. Public health and entomologic surveillance for Lyme disease will be reviewed. The major clinical manifestations, appropriate use and interpretation of diagnostic tests, and treatment options will be presented. A scientific review of the chronic Lyme disease controversy will be presented.

Suggested Readings:

1. Maria A. Diuk-Wasser et al., Human Risk of Infection with Borrelia burgdorferi, the Lyme Disease Agent, in Eastern United States, Am. J. Trop. Med. Hyg., 86(2), 2012, pp. 320–327 doi:10.4269/ajtmh.2012.11-0395, http://www.ajtmh.org/content/86/2/320.abstract

2. Ricardo G. Maggi et al., Borrelia species in Ixodes afflnis and Ixodes scapularis ticks collected from the coastal plain of North Carolina, , Ticks and Tick-borne Diseases (2010) 168-171, doi: 10.1016/j.ttbdis.2010.08.003 http://www.ncbi.nlm.nih.gov/pubmed/21771524

3. Kim M. Pepin et al., Geographic Variation in the Relationship between Human Lyme Disease Incidence and Density of Infected Host-Seeking Ixodes scapularis Nymphs in the Eastern United States, Am. J. Trop. Med. Hyg., 86(6), 2012, pp. 1062–1071 doi:10.4269/ajtmh.2012.11-0630, http://www.ncbi.nlm.nih.gov/pubmed/22665620

4. M. A. Diuk-Wasser et al., Spatiotemporal Patterns of Host-Seeking *Ixodes scapularis* Nymphs (Acari: Ixodidae) in the United States, Journal of Medical Entomology, 43(2):166-176. 2006 http://www.bioone.org/doi/abs/10.1603/0022-2585%282006%29043%5B0166:SPOHIS%5D2.0.CO%3B2

5. Piesman et al. , Ability of the Lyme disease spirochete Borrelia burgdorferi to infect rodents and three species of human-biting ticks (blacklegged tick, American dog tick, lone star tick) (Acari:Ixodidae). J Med Entomol. 1997 Jul;34(4):451-6 http://www.ncbi.nlm.nih.gov/pubmed/9220680

6. Bruce A. Harrison et al., Recent discovery of widespread *Ixodes affinis* (Acari: Ixodidae) distribution in North Carolina with implications for Lyme disease studies, *Journal of Vector Ecology, 2010 June;* 35(1): 174-179. http://www.ncbi.nlm.nih.gov/pubmed/20618664