

# AGROMEDICINE PROGRAM UPDATE

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Previous issues are available at [www.musc.edu/oem/apunews.html](http://www.musc.edu/oem/apunews.html)

## PROGRAM NOTES

>Summer is almost upon us. Scheduled presentations to lay organizations, hospital staffs and other professional groups are averaging one a week, but we are available to do more. Topics of special interest this time of year include:

**HEAT ILLNESS**  
**INSECT BITES AND STINGS**  
**MARINE INJURIES,**  
with continuing calls for  
**AVIAN INFLUENZA.**

Please contact the office by phone or e-mail to make a request for a presentation and we will make every effort to find a time to be with you. If you would prefer to make the presentation yourself, we are happy to share our Powerpoint presentations with you.

>AG-MED: The Rural Practitioner's Guide to Agromedicine, 2<sup>nd</sup> Edition, is going to the printers at the National Rural Health Association this week.

## RECENT CONSULTS

### >**ANOTHER STINGING ANT**

A young woman in the Upstate was stung by a tiny ant and developed widespread hives, swelling of her tongue and intense chest pressure. She was treated successfully for anaphylaxis. Dr. John Morse, Clemson Extension Entomologist identified the insect as a *Pachycondyla chinensis*. This may be the first recognized systemic allergic reaction in South Carolina to an ant of this type. *Pachycondyla* ants have been recognized in the upstate for several years and are known to produce systemic allergic reactions in the Orient. A study of 327 residents of an "ant-infested" area of Korea showed a 2.1% prevalence of systemic allergy to *P. chinensis*. The small ants live in loose soil, under rocks, or in rotting logs and stumps. They are known to be distributed in Virginia, North and South Carolina and Georgia. Two other *Pachycondyla* species exist in the US. No specific antivenom exists. Testing is

recommended for other insect allergies, hoping that if other allergies are found cross-tolerance can be induced through hyposensitization.



*Pachycondyla chinensis*

### >**DETERRENENTS TO ANT STINGS**

This isn't a consult, but it isn't published yet, so I'll include it here.

Early in June, at our "Intensive Review of Family Medicine," Dr. Jerome Goddard, author of The Physician's Guide to Arthropods of Medical Importance, talked to the group about

methods to prevent fire ant stings. He found none of the currently available repellent products (DEET, picaridin, eucalyptus, citrus, etc.) kept fire ants from “attacking” when disturbed. What did deter the ants was socks or even tights. Socks kept the ants from crawling up the leg as quickly, and even when the insect appeared to try to sting, no sting occurred through the sock or tights. Obviously, this may only delay the sting until the ant crawls above the sock, but it may be very useful information for persons who have insect sting allergy or other more severe reactions to ant stings.

### **FROM THE LITERATURE**

Three articles from two issues of the journal of the National Institute for Environmental Health Sciences:

#### **>IN UTERO ORGANO-CHLORINE EXPOSURE AND FETAL GROWTH AND LENGTH OF GESTATION**

Researchers at the California Department of Health Services found no adverse association between maternal serum organochlorine levels and birth weight or crown-heel length in a population of 385 low-income Latinas living in the Salinas Valley.

There was a decreased length of gestation with increasing levels of hexachlorobenzene (HCB), but not of DDT, DDE, hexachlorocyclohexane. The decreased length of gesta-

tion related to HCB did not seem to have had clinical implications for this population, given its relatively low rate of preterm delivery (6.5%).

--Fenster L, Eskenazi B, Anderson M et al. *Environ Health Perspect* 114: 597-602 (2006)

#### **>REVIEW OF NITRATES IN DRINKING WATER**

This review article presents an update on maternal exposure to nitrates in relation to possible adverse reproductive and developmental effects. Uncertainties in epidemiologic studies include the lack of individual exposure assessments that would rule out confounding of the exposure with some other cause.

The authors' conclusions: “...the current literature does not provide sufficient evidence of a causal relationship between exposure to nitrates in drinking water and adverse reproductive effects. Future studies incorporating individual exposure assessment about users of private wells—the population most at risk—should be considered.”

--Manassaram D, Backer L Moll D. *Environ Health Perspect* 113:320-327(2006)

#### **>HUMAN-HEALTH RISK ASSESSMENT FOR WEST NILE VIRUS AND INSECTICIDES USED IN MOSQUITO MANAGEMENT**

Introduction of West Nile Virus into the Western Hemisphere in 1999 has necessitated using mosquito control insecticides in areas where they traditionally have not been used or have been

used less frequently. This has resulted in concern by the public regarding risks from insecticide use. Authors from the Department of Land Resources and Environmental Sciences of Montana State University evaluated documented health effects from WNV infection and potential acute and subchronic residential exposures from insecticides. They conclude, “based on their risk assessment and the current weight of scientific evidence, that human health risks from residential exposure to mosquito insecticides are low and are not likely to exceed levels of concern. Further, the risks from WNV exceed the risks from exposure to mosquito insecticides.”

--Peterson R, Macedo P, Davis R. *Environ Health Perspect* 114:366-372 (2006)

Reprints of the above articles are available on request.

### **ON THE WEB**

Please visit the North American Agromedicine Consortium website at: [www.agromedicine.org](http://www.agromedicine.org) for information on the 19<sup>th</sup> annual meeting to be held October 15-17, 2006 at the Four Points Sheraton in Tuscaloosa, Alabama. The conference theme this year is: *Encouraging Community Preparedness for Agromedicine Concerns*. The meeting is hosted by UAB and the Alabama Agromedicine Program.