

# AGROMEDICINE PROGRAM UPDATE

MUSC DEPARTMENT OF FAMILY MEDICINE – DIVISION OF PUBLIC HEALTH AND PUBLIC SERVICE  
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*Previous issues are available at [www.musc.edu/oem/apunews.html](http://www.musc.edu/oem/apunews.html)*

## **PROGRAM NOTES**

>The Agromedicine Program has completed its move to the Department of Family Medicine building on Calhoun Street. Email, telephone and fax numbers remain the same, but our address at MUSC has changed to:

SC Agromedicine Program  
MUSC – 295 Calhoun St.  
PO Box 250192  
Charleston, SC  
29425-0192

Please call, email or write us with requests for talks to lay or professional groups in your area.

>Presentations were made during the last month in Wilmington NC, Gainesville FL and to PhD candidates in the College of Pharmacy on various aspects of pesticide toxicology, specifically human health effects. This sort of presentation would be suitable for college level students in courses on the environment or human health risks. Contact this office if you would like to arrange this kind of presentation.

MERRY CHRISTMAS  
HAPPY HANNUKAH  
HAPPY NEW YEAR!



From The SC  
AGROMEDICINE  
PROGRAM

Thank you for your support!  
Keep those consults and speaking requests coming our way!

## **RECENT CONSULTS**

>Founding Medical Director, Dr. Stan Schuman received this question from a friend:

“Our neighborhood seems overrun with cancer. Eight people in seven homes that are clustered together have cancer—one ovary, two prostate, one lymphoma, one leukemia, two breast. Doesn’t that sound like an oddly high statistic?”

Dr. Schuman responded: “Cancer clusters have been on record for many neighborhoods and census tracts for many, many years. Not a single one has led to detecting a credible causal factor (environmental carcinogen). Statisticians can reproduce clusters of any reportable cause of death by simply running their computer programs in a random numbers simulation. So far, epidemiology has only found clusters of infectious disease and genetic diseases to be meaningful. Nutritional disorders (iodine deficiency) and minerals like arsenic and nitrosamines in water sources can also cause clusters of disease.”

Dr. Schuman, in his usual thorough way, also asked Dr. Clark Heath, previously of the CDC and American Cancer Society to comment. He writes:

“What you wrote is on target...I know of no community cancer cluster in which environmental causation (chemical or radiation) has been proven. Public interest continues, however, and cluster evaluations remain a

regular activity in most public health departments. I expect that will continue as long as cancer occurs.

This doesn't mean that all such events necessarily reflect random case distributions. But it does mean that if the question is raised in any community, professional and lay people alike should be aware that most cluster events are likely to have a random origin and that, in any event, any field investigation will be difficult to conduct and is likely to be negative, even if local suspicions are strong.

At CDC over 20+ years (1960-80) we focused mostly on child cancer clusters, especially leukemia, about 50 childhood studies, of which only a few suggested some biologic cause. In no instance were chemical or radiation exposures implicated. Instead our attention was drawn to infectious agents, perhaps with increased risk in school settings or in new communities that were rapidly growing."

Our thanks to Dr. Heath and Dr. Schuman for sharing their insights.

### FROM THE LITERATURE

>Depression and Pesticide Exposure in Female Spouses of Licensed Pesticide Applicators in the Agricultural Health Study Cohort

Researchers from the Colorado Injury Control Re-

search Center report on data from the AHS pertaining to over 29000 women from Iowa and NC. Quoting from the abstract:

"After adjustment for state, age, race, off-farm work, alcohol, cigarette smoking, physician visits, and solvent exposure, depression was **significantly associated with a history of pesticide poisoning** (odds ratio [OR] 3.26; 95% confidence interval [CI]=1.72-6.19) **but not low** (OR= 1.09; CI= 0.91-1.31) **or high** (OR 1.09; 95%CI= 0.91-1.31) **cumulative pesticide exposure.**" (emphasis added)

In other words, the title of the article is misleading. In addition, there is no temporal relationship defined in the article between the date of pesticide poisoning and the date of diagnosis of depression.

Though self-reported cases of diagnosed depression occurred in 7.1% of the population, this represents a prevalence at least 50% lower than that of the general population (though self-reported diagnosed depression statistics are hard to find).

-Beseler C, Stallones I, Hoppin J et al. JOEM 2006;48(10): 1005-13

>Environmental Pollution, Pesticides, and the Prevention of Cancer: Misconceptions

In preparing for the class on pesticide toxicity, I reviewed Dr. Bruce Ames and Lois Gold's article from 1997. Now almost ten years old it

is still very timely, accurate, and well worth reading again.

A few of the main points:

"The major causes of cancer are: smoking, dietary imbalances (lack of fruits and vegetables in the diet), chronic infections and hormonal factors. "

"There is no cancer epidemic except for cancer of the lung due to smoking."

"The focus of regulatory policy is on synthetic chemicals, although 99.9% of the chemicals humans ingest are natural."

"There is no convincing evidence that synthetic chemical pollutants are important as a cause of human cancer."

As is evident from the above quotes this is a far-reaching and very interesting article.

Contact the office if you would like a copy.

--Ames B, Gold L. FASEB J 1997; 11:1041-52

### CLOSING THOUGHTS

As 2006 draws near its close these "5 Simple Rules for Happiness" seem worth considering for 2007!

1. Free your heart from hatred
2. Free your mind from worries
3. Live simply
4. Give more
5. Expect less

--Anonymous