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AMERICAN FOUNDATION FOR AGING RESEARCH

AFAR

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UPDATE ON THE 2ND BIENNIAL NORTH CAROLINA GLAXOSMITHKLINE -AMERICAN FOUNDATION FOR AGING RESEARCH SYMPOSIUM

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AFAR'S PURPOSE

To provide educational and research grants to students conducting cellular, molecular and genetic research on aging or age-related illnesses.

Preparations for the 2nd biennial NC GSK-AFAR Symposium are in full swing and we are very excited! The symposium will take place at the Hamner Conference Center at the North Carolina Biotechnology Center in the Research Triangle Park on November 8, 2008. Dr. Richard B. Hodes, Director of the National Institute on Aging is our keynote speaker. Dr. Hodes directs the research program of the National Institute on Aging (NIA) at the National Institutes of Health. A leading immunologist, Dr. Hodes was named Director of the NIA in 1993, to oversee studies of the basic, clinical, epidemiological

and social aspects of aging. Dr. Hodes is a graduate of Yale University and received his M.D., from Harvard Medical School. He completed training in Internal Medicine at Massachusetts General Hospital and in Oncology at the National Cancer Institute. Dr. Hodes' research laboratory in the National Cancer Institute focuses on the cellular and molecular mecha-

nisms that regulate the immune response.

Also in attendance will be Dr. William Friday of the William and Ida Friday Center for continuing Education, Dr. Jeff Williamson, Head, Section on gerontology and Geriatric Medicine at Wake Forest University School of Medicine as well as 30 present and former awardees who will present their research.

This symposium is made possible from a generous grant from NC GSK Foundation. In addition, this grant has funded the research of 18 students since 2005 and allowed AFAR to expand its presence across the United States.



Keynote Speaker
Dr. Richard B. Hodes
Director
National Institute on Aging

AFAR AWARDEES

**GSK AWARDEE— SOPHIA MAUND, GRADUATE — WAKE FOREST UNIVERSITY
VITAMIN D AND PROSTATE CANCER**

One in 6 men will get prostate cancer in his lifetime, and the risk increases with age. Luckily, there is ample opportunity for prevention due to the slow-developing nature of this disease. Vitamin D can inhibit prostate cancer cell growth by

inducing differentiation or by stopping cell division. We are interested in vitamin D's mode of action on maintaining normal prostate health by regulating normal prostate cell growth and differentiation. We are investigating the mo-

lecular mechanism of vitamin D-induced differentiation of prostatic progenitor/stem cells. By targeting specific components of vitamin D-mediated differentiation, we aim to potentiate the chemopreventative effects of vitamin D.

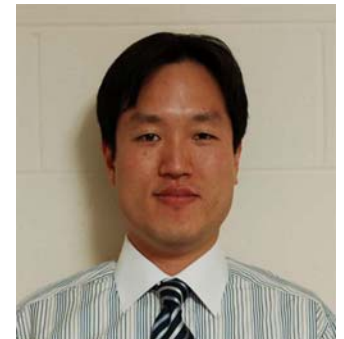
**GSK AWARDEE— JAE-YOUNG KIM, UNDERGRAD — NCSTATE UNIVERSITY
CALORIE RESTRICTION AND AGING**

Calorie restriction, defined as a reduction in energy intake, has been shown to enhance longevity of organisms ranging from yeast to mammals. Under prolonged calorie restriction, cells die. However, calorie restriction can play a positive role on aging by removing damaged and presumably

dysfunctional cells (e.g. fibroblasts, hepatocytes). However, the molecular mechanism by which energy depletion induces cell death remains unclear. My research is focused the molecular mechanism by which energy depletion causes cell death. I have demonstrated that a particular

protein is required for energy depletion-induced cell death. These and other data suggest that the protein controls energy depletion-induced cell death. In summary, the data implicate that TAK1 determines entrance of autophagy or apoptosis under energy depleted conditions. Regulation

of cell death by this protein may be important for longevity of the entire organism.

**GSK AWARDEE—LAURA BONIFACIO, GRADUATE — UNC CHAPEL HILL
CELLS AND AGING**

Aging, despite being a fundamental process of all human life, is a complex amalgam of both environmental and genetic mechanisms that has evaded complete understanding. miRNAs (small, non-coding RNAs that

regulate the expression of target mRNAs) are known to impact both development and lifespan (in some species), but a role for miRNAs in aging has yet to be defined. My research focuses on elucidating the

role of miRNA in aging and age-related diseases. This knowledge should help advance our understanding of age-related diseases and facilitate the design of new treatments for these diseases.

DID YOU KNOW?

Summer heat is especially difficult for the young and elderly. Here are some tips listed on the Baylor College of Medicine website (<http://www.bcm.edu/news/item.cfm?newsID=657>) from Dr. Robert Luchi, Professor of Medicine-Geriatrics:

1. Keep cool. Air conditioning can be a lifesaver, especially if you have heart disease. If you don't have air conditioning, head to a cool shopping center, senior center, library,

movie theater, or place of worship.

2. Cool baths or showers can provide relief. Ice bags and wet towels help too.

3. Beware of dehydration; drink plenty of water even if you're not thirsty.

4. Curtail physical activity during extremely hot weather. Activity adds to heart strain.

5. Avoid heavy meals and alcohol. Alcohol acts as a diuretic,

causing your body to lose water.

6. Limit salt use.

7. Wear loose fitting, lightweight clothing. Don't forget to wear a hat or carry an umbrella to protect your head and neck when you are outdoors.

8. Dizziness, rapid heartbeat, diarrhea, nausea, headache, chest pain, mental changes or breathing problems are warning signs that you should seek immediate medical attention.



Take the heat SERIOUSLY!!!

“Science is organized knowledge.

~Herbert Spencer

A MESSAGE FROM THE PRESIDENT

Every year since 1979 –yes, we are entering our thirtieth year – YOU have provided tens of thousands of dollars to deserving, promising students. Not just any students, but competitive, outstanding undergraduate, graduate and medical/professional students involved in research on age-related diseases and

the biology of aging. These students have investigated: age-related cancers; neuro-degeneration; immunology; biology of cell cycle and cell death; neuro-endocrine interactions and many other subjects.

AFAR funds the only student oriented Symposium on the Biology of Aging, as noted in

this issue, and the Online Symposium on the Biology of Aging.

Unlike many other charities, AFAR budgets **90% of its revenue to programs.**

So, if by chance, you have forgotten to send us that check, remember that these deserving students who you support, are helping you. The science con-

ducted by the students, and the biomedical applications that result lead to new therapies, and preventive medicine.

Thank you from all the students.

Dr. Paul F. Agris

**AFAR thanks the following
for their ongoing support**

Dr. Joseph Agris
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