



"Fulfilling the Promise" is a special AAMC initiative highlighting the collaboration between U.S. medical schools and teaching hospitals, and the National Institutes of Health (NIH). As research engines of the U.S. health system, the nation's medical schools and major teaching hospitals are awarded more than half of all NIH grants to scientists through its extramural research program. For more than 60 years, this powerful partnership has provided the public with extraordinary advances in medical research and the very best health care.

If you missed the recent Fulfilling the Promise Capitol Hill briefing on "Advancing Women's Heart Health—Research in Cardiovascular Disease" with featured speakers:

- Elizabeth G. Nabel, M.D., Director of the National Heart, Lung, and Blood Institute
- Marcia L. Stefanick, Ph.D., Professor of Medicine (Research), Stanford University School of Medicine and Principal Investigator for Stanford's Women's Health Initiative Center,

You can view the Webcast at: [www.aamc.org/research/ftp/briefings.htm](http://www.aamc.org/research/ftp/briefings.htm)

Great progress has been made in the fight against heart disease. Overall U.S. death rates from heart disease have been cut in half since 1950. Yet it remains the leading cause of death today. For women, heart disease presents a special challenge:

- Heart disease kills one in every three women.
- Eighty percent of women ages 40-60 have one or more risk factors for heart disease.
- Three million American women have had a heart attack; two-thirds of those women did not make a full recovery.

U.S. medical schools and teaching hospitals, together with the NIH, are working to reduce the number of heart disease-related deaths in women by identifying their unique risk factors and developing more effective methods to diagnose and treat heart disease in women.

## Below are examples of NIH-funded research advances in women's health and heart disease:

### Hormone therapy does not provide heart disease benefits

The Women's Health Initiative hormone studies, conducted at 40 research centers across the country, including the **Stanford University School of Medicine**, found that hormone replacement therapy (estrogen alone or in combination with progestin) did not reduce women's risk for heart disease. The hormone trials were stopped when it was determined that some of the women participating were at an increased risk for heart attack, breast cancer, stroke, and blood clots.

<http://prevention.stanford.edu/word-pdf/women.pdf>

### New diagnostic tools are needed for women

The Women's Ischemia Syndrome Evaluation (WISE) study, led by researchers at **Cedars-Sinai Medical Center** in Los Angeles, has reported that heart disease goes undiagnosed in as many as 3 million women because cholesterol plaque may not build up into major blockages, as it does in men, but instead spreads evenly throughout the artery wall, eventually starving the heart muscle of its blood supply. As a result, some diagnostic tests reveal "clear" arteries in women, falsely indicating low risk.

<http://www.cedars-sinai.org/pdf/CardiologyWISEJACC012606.pdf>

## August 2006

More information  
[www.aamc.org/ftp](http://www.aamc.org/ftp)

Watch for information about the next Hill briefing in:

## Fall 2006

See how the NIH budget supports medical research

[www.aamc.org/ftp/nih.htm](http://www.aamc.org/ftp/nih.htm)

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## ABOUT THE AAMC

The Association of American Medical Colleges is a nonprofit association representing all 125 accredited U.S. and 17 accredited Canadian medical schools; nearly 400 major teaching hospitals and health systems, including 68 Department of Veterans Affairs medical centers; and 96 academic and scientific societies. Through these institutions and organizations, the AAMC represents 109,000 faculty members, 67,000 medical students, and 104,000 resident physicians.

### **Certain drugs affect women differently**

Researchers at **Yale-New Haven Hospital** determined that digoxin therapy for heart failure had different effects in women than in men. Although the drug reduced the hospitalization rate for men, it was linked to an increased risk of death in women taking the drug, compared with women taking a placebo.

<http://www.yale.edu/opa/newsr/02-10-31-01.all.html>

### **Hormone therapy increases dementia risk**

Results from the Women's Health Initiative Memory Study, led by a researcher at **Wake Forest University School of Medicine**, indicate that women taking combination hormone therapy have twice the rate of dementia, including Alzheimer's disease, than women not taking the medication.

<http://www.wfu.edu/wowf/archives/05-28-2003-index.html>

### **African-American women are at higher risk than men**

Forty percent of African-American women in the Jackson Heart Study, based at the **University of Mississippi Medical Center**, were discovered to have metabolic syndrome, as compared with 29 percent of men. The syndrome is characterized by a concurrence of several risk factors for heart disease—abdominal obesity, low HDL cholesterol, elevated triglycerides, high blood pressure, and abnormal blood sugar.

<http://www.nhlbi.nih.gov/new/press/05-11-15b.htm>

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## **Other pioneering NIH-funded research under way at U.S. medical schools and teaching hospitals:**

### **New compounds to shrink tumors**

Researchers at the **University of Minnesota Academic Health Center** have developed novel anti-cancer drugs to treat solid tumors. These "small molecules" belong to a class of pharmaceutical agents called anti-angiogenics. The new compounds are a refined form of drugs that effectively reduce blood flow to the tumor, thereby inhibiting tumor growth. In studies with mice, the compounds inhibited tumor growth by up to 80 percent, and in combination with chemotherapy, tumors essentially disappeared.

<http://www.ahc.umn.edu/news/releases/cancer070506/home.html>

### **Cells give clues to lung disease**

Researchers at **Temple University School of Medicine** are studying how inflammation occurs in the epithelial cells that line the airways of patients with chronic obstructive pulmonary disease. Most of the research focuses on small proteins called chemokines that attract inflammatory cells from the blood into the airway and lung tissue. Scientists know that epithelial cells have a unique chemokine receptor, and they are trying to determine if it can play a role in lung injury or repair.

[http://www.temple.edu/news\\_media/ej0406\\_004.html](http://www.temple.edu/news_media/ej0406_004.html)

### **More intense chemotherapy improves survival for myeloma patients**

A long-term trial on the effectiveness of more intensive chemotherapy during treatment of multiple myeloma, one of the least curable cancers, showed improved remission and overall survival rates. The research was conducted by a team from the **University of Arkansas for Medical Sciences**. A study of myeloma patients showed those who received the more intensive regimen of melphalan-based chemotherapy (a certain type of cancer drug) before and after bone marrow transplants had higher remission and overall survival rates, along with a longer time period without relapse.

[http://www.uams.edu/update/absolutenm/templates/news\\_release\\_andrea.asp?articleid=4752&zoneid=35](http://www.uams.edu/update/absolutenm/templates/news_release_andrea.asp?articleid=4752&zoneid=35)

### **Scientists coax regrowth of nerves after spinal cord injury**

Neuroscience researchers from **Johns Hopkins University** and **University of Michigan Medical School** have developed a treatment that helps spinal cord nerves in mice regrow after injury. The researchers

treated experimental nerve injuries in rats with an enzyme called sialidase that they isolated from bacteria. Four weeks later, more than twice as many nerves in the spinal cords of sialidase-treated rats grew new nerve fibers compared with untreated rats.

<http://www.med.umich.edu/opm/newspage/2006/nervefibers.htm>

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