

# FYI from the NHLBI



Public Interest News from the National Heart, Lung, and Blood Institute

Vol. 2, Issue 3, December 2001

## Message from the Director

I am pleased to note that we are moving forward with our third annual public interest organization meeting. I hope that all of your groups will be represented since the meeting cannot be a success without you. As before, National Heart, Lung, and Blood Advisory Council members will be invited to the meeting, and everyone is welcome at the Council's public session the following day. However, space is limited in the Council room; be sure to reserve your seat.

I recently attended the annual meeting of the American Heart Association (AHA), where NHLBI researchers announced some very exciting research results. One of them concerned an implantable heart pump called a left ventricular assist device. It was shown to significantly extend and improve the lives of terminally ill patients with end-stage heart failure. Although the device caused serious complications for some patients, we believe that we are one step closer to providing a new treatment option to the thousands of patients for whom a poor quality of life is otherwise certain.

Heart failure is closely associated with the major modifiable risk factors for coronary heart disease: smoking, high cholesterol levels and blood pressure, diabetes, and obesity. To help you take care of your heart, we're working with the AHA to bring you American Heart Month in February. Check your local news sources to learn about AHA-sponsored programs in your area to prevent cardiovascular diseases and stroke.

Sincerely yours,

Claude Lenfant, M.D.  
Director

## What's Inside?

Will We See You in 2002? . . . . .	2
Landmark Framingham Heart Study Recruits Third Generation . . . . .	2
News from Capitol Hill . . . . .	2
NHLBI Research Initiatives . . . . .	3
Spotlight on Our Web Site. . . . .	4
National Heart, Lung, and Blood Advisory Council Fall Meetings. . . . .	4
Upcoming Events. . . . .	5
Research Advances from the NHLBI. . . . .	5
Need More Information?. . . . .	6
Media Tips to Get Your Message Heard. . . . .	6
Constituent's Corner . . . . .	6

## Act in Time to Heart Attack Signs

Each year, about 1.1 million Americans suffer a heart attack. And, most make the potentially fatal mistake of waiting too long before seeking medical help. Fast action is your best weapon against a heart attack because clot-busting drugs and other treatments can stop a heart attack in its tracks. The sooner the treatments are started, the more good they will do – and the greater the chances are for survival and full recovery. To be most effective, they should be given within one hour of the start of heart attack symptoms.

Granted, it's not always easy to tell if someone is having a heart attack. Many people think a heart attack is sudden and intense, like a "movie" heart attack where a man clutches his chest and falls over. The truth is that heart attacks can occur in men or women, and many start slowly as mild pain or discomfort. You may not be sure what's wrong, and your symptoms may come and go. Even if you've already had one heart attack, you may not recognize symptoms of another because they may be entirely different. Therefore, it's vital that you learn the warning signs of a heart attack. They are:

- Chest discomfort (e.g., pressure, squeezing, fullness, or pain) in the center of the chest that lasts for more than a few minutes, or goes away and comes back.
- Shortness of breath, which often occurs at the same time as, but can occur before, chest discomfort.
- Discomfort in other areas of the upper body (e.g., in one or both arms, the back, neck, jaw, or stomach).
- Other symptoms such as breaking out in a cold sweat, nausea, or light-headedness.

When in doubt, check it out!  
Call 9-1-1 within a few minutes  
– five, at most! An ambulance  
is the best way to get to the  
hospital because:

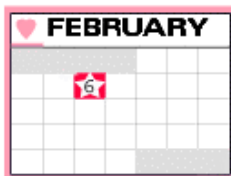


- Emergency medical service (EMS) personnel can begin treatment even before you get to a hospital.
- The heart may stop beating during a heart attack. EMS personnel have equipment to restart it.
- Heart attack patients who arrive by ambulance tend to receive faster treatment when they reach a hospital.

To learn more about heart attacks, including who's at risk, what tests can diagnose a heart attack, what medications are prescribed for heart disease, and answers to other frequently asked questions, visit the Act in Time to Heart Attack Signs Web site at [www.nhlbi.nih.gov/actintime](http://www.nhlbi.nih.gov/actintime). And, work with your doctor to create a "heart attack survival plan" so that you know how to "act in time to heart attack signs."

## Will We See You in 2002?

We've reserved conference rooms, ordered food, recruited discussion leaders, and even scheduled a celebrity guest. Now, we're eagerly counting the days until you arrive for the third annual Public Interest Organization meeting. Topics are similar to last years', but with a twist – instead of learning from Institute staff and Council members, we're asking everyone to be prepared to share how your organization funds research, gets involved in clinical research, and communicates its message. Learn what others are doing, and brainstorm about what you could do differently. Dr. Lenfant will be available for an "open mike" question-and-answer session at the end of the meeting, and Council members, NHLBI staff, and other experts will describe specific opportunities for groups to partner with the NHLBI. The meeting can't be a success without your participation, however. If you received an invitation and have not yet responded, please do so by January 7, 2002.



## Landmark Framingham Heart Study Recruits Third Generation

The Framingham Heart Study (FHS) – which helped give the world the term "risk factors" to describe behaviors or conditions that increase the chance of disease – is about to begin recruiting its third generation of participants. Researchers plan to enroll about 3,500 grandchildren of the study's 5,209 original participants, recruitment of whom began in 1948. In 1971, the Framingham Offspring Study was created, adding 5,124 men and women (children of the original participants) and their spouses.

Key goals of the Third Generation Study are to:

- Identify new risk factors for cardiovascular, lung, and blood diseases.
- Identify genes that contribute to good health and to the development of cardiovascular, lung, and blood diseases.
- Develop new tests that can detect very early stages of coronary atherosclerosis in otherwise healthy adults.

"Expanding to a third generation opens up the chance to explore important new questions about disease risk, especially those related to genetics," said Dr. Lenfant. "We've come a long way in our understanding of what influences the disease process, and that knowledge has contributed to dramatic declines in deaths from heart disease and stroke. But these are complicated diseases and many questions remain unanswered. With the help of another generation, FHS may close in on the root causes of cardiovascular disease and lead to improvements in how we prevent, diagnose, and treat cardiovascular disease."

"The collaboration between FHS scientists and participants has been remarkable," said FHS Director Dr. Daniel Levy. "The study has been possible only because of the participants' dedication. All of our discoveries are their gift to the world."



## News from Capitol Hill

The House and Senate have passed their respective versions of appropriations bills to provide funding for the NIH, including the NHLBI. Whereas the House is proposing that the NHLBI receive \$2,547,675,500, 11.4 percent more than what it received in Fiscal Year (FY) 2001, the Senate is recommending slightly more than \$2.6 billion, a 14.5 percent increase from FY 2001. Both urge the NHLBI to give high priority to cardiovascular disease research, placing an emphasis on understanding cardiovascular disease in women, pediatric heart disease, and the possible association between bone formation, repair, and breakdown and development of heart disease. Other research topics mentioned by both chambers include asthma, Cooley's anemia, diabetes, hemophilia, primary pulmonary hypertension, and transfusion medicine. The House version of the bill also mentions chronic obstructive pulmonary disease, hematological cancers, Lyme disease, transmissible spongiform encephalopathies (e.g., mad cow disease), lymphangioleiomyomatosis (LAM), neurofibromatosis, and interactions between tuberculosis and AIDS. The Senate bill indicates special interest in umbilical cord blood stem cells and sickle cell anemia research. At press time, a conference committee was working to resolve differences between the bills, after which a consolidated bill will be presented to the House and Senate for approval. Once approved, it will be sent to the President to be signed into law. You can check the status of the FY 2002 appropriations and read the actual text of the bills by following links at [thomas.loc.gov/home/approp/appover.html](http://thomas.loc.gov/home/approp/appover.html). The NHLBI's budget is a component of the "Labor/HHS/Educ." bill.

Two new bills relevant to NHLBI interests have been introduced in the House of Representatives. Rep. Clifford Sterns (R-FL) introduced a resolution to establish Chronic Obstructive Pulmonary Disease (COPD) Awareness Month (H. Con. Res. 197) to raise public awareness about the prevalence of COPD and the serious problems associated with it. Rep. Carolyn McCarthy (D-NY) introduced the Diamond-Blackfan Anemia Act (H.R. 3014) to encourage research on Diamond-Blackfan anemia, a rare disorder that affects an estimated 600 individuals worldwide. If passed, the bill would require the NHLBI to:

- Convene a scientific workshop on Diamond-Blackfan anemia.
- Develop and implement a comprehensive research plan for Diamond-Blackfan anemia.
- Facilitate expansion, maintenance, and use of the Diamond-Blackfan Anemia National Registry.

## NHLBI Research Initiatives

From time to time, the NHLBI invites investigators to submit grant applications or contract proposals for specific research programs. We currently are soliciting applications for the following programs. Unless a due date is mentioned, applications are accepted for February 1, June 1, and October 1 deadlines each year. For full descriptions of these and other research initiatives, visit [www.nhlbi.nih.gov/funding/inits/index.htm](http://www.nhlbi.nih.gov/funding/inits/index.htm).

### **Basic Research to Improve Cardiopulmonary and Neurological Outcomes Following Resuscitation from Cardiopulmonary Arrest (RFA-HL-02-003)**

- Applications Due: 2/12/02
- Objectives: To understand the effects of whole-body ischemia and subsequent blood flow restoration on cardiovascular and neurological function.

### **Cellular and Molecular Mechanisms of Primary Pulmonary Hypertension (PPH) (PA-00-043)**

- Objectives: To promote research to elucidate cellular and molecular mechanisms involved in the unique vascular remodeling that characterizes PPH and in the regulation of vascular tone during its development.

### **Centers for Reducing Asthma Disparities (RFA-HL-02-006)**

- Applications Due: 3/12/02
- Objectives: To promote partnerships between minority-serving institutions that lack strong research programs and research-intensive institutions to conduct collaborative research to reduce asthma disparities.

### **Functional Tissue Engineering for Heart, Vascular, Lung, Blood, and Sleep Disorders and Diseases (PAR-01-006)**

- Phase I Applications Due: 3/13/02
- Phase II Applications Due: 3/13/02, 3/13/03, 3/12/04
- Objectives: To stimulate engineering of biological substitutes for damaged tissues and organs and to promote development of novel tissue regeneration and remodeling approaches.

### **Innovative Concepts and Approaches to Developing Functional Tissues and Organs for Heart, Vascular, Lung, and Blood Applications: Exploratory/ Developmental Research Grants (RFA-HL-02-004)**

- Applications Due: 2/20/02
- Objectives: To develop new approaches, technologies, tools, methods, devices, cells, biomolecules, and biomaterials that can be used as biological substitutes or can foster tissue regeneration in vivo.

### **Interaction of Genes and Environment in Shaping Risk Factors for Heart, Lung, Blood, and Sleep Disorders (RFA-HL-02-010)**

- Applications Due: 3/22/02
- Objectives: To identify people who are most likely to benefit from environmental changes to reduce the development or progression of heart, lung, blood, and sleep diseases and disorders.

### **NHLBI Innovative Research Grant Program (RFA-HL-01-016)**

- Applications Due: 2/16/02, 6/18/02
- Objectives: To facilitate innovative studies that require the use of existing data sets or specimen collections.

### **NHLBI Shared Microarray Facilities (RFA-HL-02-007)**

- Applications Due: 2/26/02
- Objectives: To promote the application of microarray technology to cardiovascular, pulmonary, hematological, and sleep disorders research.

### **Novel Biomarkers of Chronic Obstructive Pulmonary Disease (COPD) (RFA-HL-02-005)**

- Applications Due: 2/26/02
- Objectives: To promote examination of associations between specific aspects of COPD and biomarkers that can be measured by minimally invasive methods.

### **Pathogenesis and Treatment of Lymphedema (PA-01-035)**

- Objectives: To stimulate research on the biology of the lymphatic system, the underlying developmental, cellular, and molecular mechanisms that cause lymphedema, and new therapeutic interventions for patients with primary and secondary lymphedema.

### **Physical Activity and Obesity Across Chronic Diseases (PA-01-017)**

- Objectives: To examine relationships between physical activity and obesity, to improve assessment of physical activity and energy balance, and to test interventions that incorporate physical activity for obesity prevention or treatment related to chronic diseases.

### **Restless Legs Syndrome and Periodic Limb Movement Disorder (PA-01-086)**

- Objectives: To enhance understanding of and develop treatments for restless legs syndrome and periodic limb movement disorder.

### **Role of Infectious Agents in the Development of Vascular Disease (RFA-HL-02-002)**

- Applications Due: 2/12/02
- Objectives: To identify and characterize the specific cellular and molecular mechanisms by which infectious agents contribute to vascular disease and thereby establish a basis for development of new therapies.

### **SBIR/STTR Technologies for Monitoring and Performing Resuscitation (PA-01-054)**

- Objectives: To improve monitoring of molecular or physical derangements associated with circulatory, hypoxemic, or traumatic arrest and to elucidate the unique pathophysiology of irreversible injury following multiple organ ischemia and reperfusion.

### **Transfusion Medicine/Hemostasis Clinical Research Network (RFA-HL-02-001)**

- Applications Due: 2/22/02
- Objectives: To evaluate novel and existing treatments (e.g., blood products, cytokines) for patients with blood disorders such as idiopathic thrombocytopenia and thrombotic thrombocytopenic purpura.



## Spotlight on Our Web Site

Traditionally, December holidays are celebrated with festivities that include friends, family and, of course, food. This month, we are featuring the NHLBI's Obesity Education Initiative's Web site, [www.nhlbi.nih.gov/health/public/heart/obesity/lose\\_wt](http://www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt), which includes tips for maintaining your healthy eating habits when dining out and links to three popular collections of heart healthy recipes. The 32-page cookbook *Heart-Healthy Home Cooking African American Style* includes a recipe for candied yams that is sure to sweeten your dinner without adding much fat. You don't have to *hablar español* to serve dishes from the bilingual *Platillos Latinos ¡Sabrosos y Saludables! (Delicious Heart-Healthy Latino Recipes)* cookbook; consider substituting a fresh cabbage and tomato salad for coleslaw. But don't overindulge just because the garlic mashed potatoes, green beans sauté, and crunchy pumpkin pie came from the *Stay Young at Heart* collection. Low in fat does not mean low in calories, and reducing dietary fat alone without reducing calories will not help you lose weight.

## National Heart, Lung, and Blood Advisory Council Fall Meetings

### September 6

Dr. Lenfant began the meeting with a reminder that September is Sickle Cell Disease Month and National Cholesterol Education Month. He announced that Dr. Barbara Alving, Director, Division of Blood Diseases and Resources (DBDR), is the new NHLBI Deputy Director; Dr. Charles Peterson, Director, Blood Diseases Program, will be Acting Director of DBDR. Dr. Lenfant also mentioned a recent visit from Mr. Tommy Thompson, Secretary of the Department of Health and Human Services (DHHS).

Council discussed how the NHLBI can implement recommendations to improve the effectiveness and efficiency of clinical trials and to recruit and retain minority Americans in research careers. They also received updates on NHLBI health education activities including

- the NHLBI health information network, available through the NHLBI's Healthy People 2010 Gateway ([hin.nhlbi.nih.gov](http://hin.nhlbi.nih.gov)).
- the *Act in Time to Heart Attack Signs* ([www.nhlbi.nih.gov/actintime/](http://www.nhlbi.nih.gov/actintime/)) campaign to urge physicians to educate their patients about heart attacks.
- the partnership between the National Center on Sleep Disorders Research and Garfield the cat, as Star Sleeper and "spokescat." Garfield made a special appearance promoting the Star Sleeper Web site ([starsleep.nhlbi.nih.gov](http://starsleep.nhlbi.nih.gov)).
- the National Cholesterol Education Program's efforts to disseminate the latest information on lowering cholesterol to reduce heart disease risk ([hin.nhlbi.nih.gov/cholmonth/](http://hin.nhlbi.nih.gov/cholmonth/)).

Dr. Raynard Kington, Director, NIH Office of Behavioral and Social Science Research, described the National Research Council report *New Horizons in Health: An Integrative Approach*. Dr. Peter Kaufmann, NHLBI, outlined related NHLBI activities.

During the closed portion of the meeting, the Council concurred on the award of 107 grants for a total cost of \$56,005,231.

The next National Heart, Lung, and Blood Advisory Council (NHLBAC) meeting is scheduled for 8:30 A.M. on February 7, 2002. It is open to the public and will be in NIH Building 31C, Conference Room 10.

The FYI from the NHLBI staff thanks Ms. Paula Polite and Ms. Sue Byrnes, members of the NHLBAC, for their efforts in preparing this summary. Full minutes of Council meetings and summaries of the initiatives are available at [www.nhlbi.nih.gov/meetings/nhlbac](http://www.nhlbi.nih.gov/meetings/nhlbac).

### October 18

Dr. Lenfant called the Council's 204th meeting to order and thanked four Council members whose terms expire in October 2001. He noted that the NHLBI is operating under a continuing resolution until Congress approves the fiscal year (FY) 2002 budget.

The Council discussed two proposed changes to large grant programs sponsored by the NHLBI. Beginning in FY 2003, applicants for selected programs will be able to apply for an additional \$100,000 to create Skills Development Cores to help new investigators gain experience in multidisciplinary research. The NHLBI is also revitalizing its Specialized Centers of Research so that they focus predominantly on the clinical aspects of research; the centers will now be called Specialized Centers of Clinically Oriented Research, to emphasize the change.

Drs. Gregory Burke, Wake Forest University School of Medicine, and Lori Mosca, Columbia University Medical School and New York Presbyterian Hospital, summarized recommendations of the Task Force on Research in Prevention of Cardiovascular Disease. The task force's objective was to develop a research agenda and an action plan to prevent cardiovascular disease.

Dr. Richard Childs of the NHLBI Hematology Branch described the results of an NIH clinical trial for patients with renal cell carcinoma. The protocol takes advantage of the observation that transplanted stem cells can launch an immunologic assault on cancer cells. Results from the first 19 patients were published last year in the *New England Journal of Medicine* (Vol. 343[11], pages 750-758). Dr. Childs also discussed advances in treating graft-versus-host disease and their profound effect on patients who otherwise might have died from transplant-related complications.

The Council discussed 24 research initiatives that the NHLBI has considered supporting. During the closed portion of the two-day meeting, the Council concurred on the award of 209 grants for a total cost of \$86,509,347.

<b>Upcoming Events</b>			
<b>Date</b>	<b>Activity</b>	<b>Details</b>	<b>For Additional Information</b>
1/10 - 1/12	Systemic Lupus Erythematosus: Targets for New Therapeutics	Natcher Conference Center - Building 45, NIH, Bethesda, MD. To facilitate the exchange and integration of scientific information between scientists working in disparate areas relating to lupus, and to identify novel strategies for clinical intervention.	niams@courtesyassoc.com
2/1 - 2/28	American Heart Month	See your local news media for announcements.	www.americanheart.org
2/6	Third Annual Public Interest Organization Meeting	Bethesda, MD. Learn how other organizations communicate their messages, support research, and collaborate with researchers.	www.nhlbi.nih.gov/public
2/7	National Heart, Lung, and Blood Advisory Council	8:30am - 2:00pm NIH Main Campus Building 31C, Conference Room 10, Bethesda, MD. Open to the public.	www.nhlbi.nih.gov/meetings/nhlbac/
2/7 - 2/9	27 <sup>th</sup> International Stroke Conference	San Antonio, TX. The International Stroke Conference highlights recent advances in the treatment and prevention of cerebrovascular disease and stroke.	www.strokeconference.org
2/18 - 2/21	5th International Congress on Pediatric Pulmonology (CIPP V)	Nice, France. CIPP V will offer updates on major aspects of pediatric pulmonology, including issues pertaining to pediatric pulmonology in developing countries.	www.cipp-meeting.com
3/22 - 3/24	The LAM Foundation Research Conference	Cincinnati, OH. Researchers will discuss the pulmonary smooth muscle cell infiltration and cystic lung destruction that occur during lymphangioleiomyomatosis (LAM).	lam.uc.edu
4/5 - 4/6	Cardiac Risk Assessment: New Dimensions for 2002 and Beyond	Washington, DC. Sponsored by the American Association of Clinical Chemistry, the conference will focus on the best methods for diagnosing and monitoring cardiovascular diseases.	www.aacc.org/meetings/Beckman.stm

## Research Advances from the NHLBI

**Inhaled Steroids Accelerate Bone Loss, but Still Recommended as Asthma Treatment.** Researchers have observed that premenopausal women using inhaled corticosteroids to treat persistent asthma may experience accelerated bone loss in the hip compared with those who do not use inhaled steroids. Although the yearly changes were small, their long-term cumulative effects could ultimately put some women at high risk of hip fracture. Because inhaled steroids provide the best daily control of persistent asthma and poor asthma control can lead to life-threatening complications, the NHLBI encourages all female patients with asthma to work with their doctors on a comprehensive treatment plan that includes measures to control their asthma symptoms and maintain bone health.

**“High-Normal” Blood Pressure Increases Cardiovascular Risk.** People with a systolic blood pressure of 130-139 mm Hg and/or a diastolic pressure of 85-89 mm Hg are 1.5 to 2.5 times more likely to suffer from heart attack, stroke, or heart failure than those with optimal blood pressure. Although high-normal blood pressure is a risk factor for cardiovascular events regardless of sex or age, it conveys even higher risk for patients age 65 or older. The results, which come from data collected through the Framingham Heart Study, underscore the importance of lowering high-normal blood pressure; for most people, treatment would consist of such lifestyle changes as eating less sodium and more fruits and vegetables, losing extra weight, and becoming physically active.

**Women with Rare Lung Disease Found to Also Have High Prevalence of Meningioma.** Scientists at the NHLBI have found that women with a rare lung disease known as lymphangioleiomyomatosis (LAM) have a high prevalence of meningioma, a type of brain tumor. It is not clear whether the tumors are caused by LAM itself, hormonal treatments for the disease – or a combination of the two. Although abnormal cells in the lungs and other tissues of LAM patients produce certain growth factors that are believed to foster meningiomas, “we cannot rule out the possibility that the high prevalence of meningiomas may be a result of both LAM and progesterone therapy,” said Dr. Joel Moss, chief of NHLBI’s Pulmonary-Critical Care Medicine Branch and lead investigator of the study.

## Need More Information?

- For health-related questions and publications, please contact the trained information specialists at the NHLBI Information Center (NHLBIinfo@rover.nhlbi.nih.gov) or write to the Information Center at P.O. Box 30105, Bethesda, MD 20824-0105.
- For communications pertaining to NHLBI policies and priorities, contact the NHLBI Office of Public Liaison (SL34V@nih.gov).
- For additional information regarding NHLBI events, consult the references provided or [www.nhlbi.nih.gov/calendar/nhcal.htm](http://www.nhlbi.nih.gov/calendar/nhcal.htm). Most other NIH Institutes and Centers also maintain calendars on their Web sites. Links to their Web pages are at [www.nih.gov/icd](http://www.nih.gov/icd).

## Media Tips to Get Your Message Heard

What kinds of stories are most likely to get published? How can you get coverage in newspapers or on radio or television? How do you approach the media? Do you need to be doing more to get your message out? To answer these questions, the NHLBI Office of Prevention, Education, and Control put together the following suggestions.

### Identify News

Good news stories are timely, important to a large number of people, and contain human interest components and interesting facts. They usually:

- educate the audience about a disorder,
- report an event or activity, or
- promote actions the audience can take.

### Develop a Media Plan

- Identify goals. Determine what you want people to know.
- Identify the audiences you want to reach and the media they use.
- Develop appropriate messages for each target audience, outlining actions they should take and why.
- Compile a media list, using your public library's media directory.
- Produce materials for a press kit. Write a media advisory (one page describing the event and inviting the media) and a press release (a mini news story). Include how the issue affects the local community.
- Construct a timetable of outreach events and activities. Be mindful of local media deadlines.
- Add an evaluation component so you can determine whether you have been successful.

### Get to Know Your Media

#### Environment

- Become familiar with local news media. Pay specific attention to reporters who have covered stories related to health issues. Don't overlook sports newsletters, publications for seniors and for minority groups, and radio and television public affairs shows.
- Call local media outlets and ask who covers health. Find out who does local cable programming and contact their news and public affairs programs.
- Contact local health reporters. Tell them what you're doing and ask if they are interested in working with you on a local story. Build a relationship; become a trusted resource. Work with them to develop a feature story. Invite reporters to cover events.
- List events in community calendars in local media.
- Identify a local specialist willing to talk to the media. Place the spokesperson on talk shows.

### Evaluate Your Activities

- Establish baseline measurements.
- Determine whether the audiences were reached and objectives were achieved.



*Communicating your message also will be a topic at the upcoming Public Interest Organization meeting. Make sure your group is represented.*

## Constituents' Corner

We are reserving space for you, our readers, to share ideas and broadcast opinions. We invite you to submit your comments, thoughts, and suggestions via email ([NHLBI.Listens@nih.gov](mailto:NHLBI.Listens@nih.gov)) or snail mail (Public Interest News, c/o Office of Science and Technology, Building 31, Room 5A03, 31 Center Drive, MSC-2482 Bethesda, MD 20892-2482).