

FYI from the NHLBI



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

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NHLBI Welcomes New Director Elizabeth G. Nabel, M.D.

Effective February 1, Dr. Elizabeth Nabel assumed the position of Director, NHLBI.

Dr. Nabel joined the NHLBI in 1999 as the Institute's Scientific Director of Clinical Research. Her many accomplishments in that position include initiation of a state-of-the-art training and research program in cardiovascular surgery and a program to investigate genetic variation among patients with vascular diseases. During her time at the NHLBI, Dr. Nabel has also served as the chief of the Institute's Vascular Biology Section, directing research on the molecular, cellular, and genetic mechanisms that cause vascular disorders. Her lab, which has published more than 200 papers, has studied factors involved in the regulation of vascular smooth muscle cell growth and vascular inflammation. This research has opened up new avenues for therapeutic targets for vascular diseases.

A native of Minneapolis, Minnesota, Dr. Nabel received her medical education at Cornell University Medical College and then moved to Brigham and Women's Hospital and Harvard University where she completed an internship and residency in internal medicine and a clinical and research fellowship in cardiovascular medicine. She joined the faculty at the University of Michigan in 1987 as an Assistant Professor of Medicine, and rose through the ranks, becoming Director of the Cardiovascular Research Center in 1992, Professor of Internal Medicine and Physiology in 1994, and Director of the Division of Cardiology in 1997. While at the University of Michigan, she became known for her research in the fields of vascular biology and molecular cardiology and for her gene transfer studies in the cardiovascular system.

"I am honored to lead the NHLBI," said Dr. Nabel. "The Institute has a long and distinguished record in support of research on heart, lung, blood, and sleep diseases. As we look to the future, there are unprecedented opportunities to advance our understanding of these diseases and to improve upon the care and treatment of the millions of people affected by them. The NHLBI will strive to address these challenges through a research agenda that builds upon innovation, creativity, and the most advanced biomedical technologies," she added.

Cooperative Research Program for Improved Hemophilia Therapy

The NHLBI and the National Hemophilia Foundation (NHF) are implementing a cooperative research program to improve treatments for bleeding disorders such as hemophilia and von Willebrand disease. Together the NHLBI and the NHF will be able to fund more highly meritorious applications than the NHLBI would be able to support on its own.

The NHLBI will commit FY 2005 funds sufficient to support 4 to 5 awards under the request for applications (RFA HL-04-032). The NHF plans to support on its own an additional 4 to 5 new grants relevant to its mission. The new program will address the inadequacies of current therapies by supporting research in several areas identified in discussions with the Foundation.

Partnering with public interest organizations (PIOs) through a cooperative research program is a model the NHLBI has used before with the Cystic Fibrosis Foundation. This approach can be of mutual benefit when a research need is identified, the scientific knowledge is sufficient to address it, and a PIO is interested in working with the NHLBI. PIOs interested in exploring this type of program are encouraged to contact Dr. Carl Roth at 301-496-6331 or rothc@nih.gov.

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News from Capitol Hill

The fiscal year (FY) 2005 appropriations process was completed on December 8, 2004, when the President signed the Consolidated

Appropriations Act, 2005 (H.R. 4818), into law as Public Law 108-477. The law, which has been referred to as an “omnibus” appropriations act because it includes several appropriations bills that typically are discussed and voted on separately, increased the NIH budget by 2 percent over its FY 2004 appropriation. Of the \$28.364 billion budgeted for the NIH, \$2.941 billion was appropriated for the NHLBI, an increase of 2.1 percent over the NHLBI budget for FY 2004.

Earlier in 2004, President Bush signed the Asthmatic Schoolchildren’s Treatment and Health Management Act of 2004 (H.R. 2023) into law as Public Law 108-377. It requires the Secretary, DHHS, when making grants to states for asthma-related activities, to give preference to those that require schools to allow students to self-administer medications for asthma or anaphylaxis.

Need More Information?

We are always interested in receiving comments and suggestions from the community. If you or your organizations have questions for me or for the Institute, please contact me at nabele@nhlbi.nih.gov or Dr. Carl Roth at rothc@nih.gov.

Elizabeth G. Nabel, M.D.
Director, NHLBI

For information on specific issues, the following contacts may be helpful:

- For health-related questions and publications, please contact the trained information specialists at the NHLBI Information Center (NHLBIinfo@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 (nhlbi.listens@nih.gov).
- For additional information regarding NHLBI events, consult the references provided or 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.

NIH Resources

Guide for Understanding Genetic Conditions

The National Library of Medicine (NLM), NIH, offers information about genetic conditions and the genes or chromosomes responsible for them on its Genetics Home Reference Web site (<http://ghr.nlm.nih.gov>). The Web site, which was designed for the public, provides explanations that are easy to understand.

Users can browse topics by specific genetic conditions, genes, or chromosomes. The site features an online handbook, titled “Help Me Understand Genetics,” which is an illustrated, basic explanation of how genes work and how mutations cause disorders. The handbook also includes current information about genetic testing, gene therapy, and the Human Genome Project. Additional features on the Web site include a glossary of genetic and medical terms and links to relevant genetic resources.

Web Site for New Investigators

The Office of Extramural Research, NIH, established a Web site for new investigators (http://grants.nih.gov/grants/new_investigators/index.htm). The site features resources that new investigators can use to understand and work with the NIH, describes current NIH funding policies, and provides links to helpful hints for preparing a first application for NIH support.

New Treatment Guidelines for Pregnant Women with Asthma

The National Asthma Education and Prevention Program (NAEPP), which is administered by the NHLBI, issued new treatment guidelines for managing asthma during pregnancy. The guidelines emphasize that controlling asthma during pregnancy is important for the health and well-being of the mother as well as for the healthy development of the fetus.

A stepwise approach to asthma care similar to that used in the NAEPP general asthma treatment guidelines for children and nonpregnant adults is recommended. Under the approach, medication is stepped up in intensity if needed, and stepped down when possible, depending on asthma severity. Because asthma severity changes during pregnancy for most women, the guidelines also recommend that clinicians who provide obstetric care monitor asthma severity during prenatal visits.

For more information on the guidelines, visit www.nhlbi.nih.gov/health/prof/lung/asthma/astpreg.htm.

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. For full descriptions of these and other research initiatives, visit www.nhlbi.nih.gov/funding/inits/index.htm.

Bioengineering Approaches to Energy Balance and Obesity (RFA-HL-04-022)

Applications due: February 16, 2005

Objective: To develop and validate new and innovative bioengineering technology to address clinical problems related to energy balance, intake, and expenditure.

Cellular and Genetic Discovery Toward Curative Therapy in Myeloproliferative Disorders (MPD) (RFA-HL-04-034)

Applications due: February 16, 2005

Objective: To search for new cellular and genetic markers associated with the origin and progression of MPD that can be applied to the development of new therapeutics.

Centers of Excellence in Translational Human Stem Cell Research (RFA-NS-05-005)

Applications due: March 24, 2005

Objective: To accelerate application of the latest advances in human stem cell biology for the development of diagnostic or therapeutic uses and for preclinical studies employing human stem cells in animal models of disease.

Community Participation in Research (PAR-05-026)

Applications due: May 17, 2005, 2006, 2007

Objective: To support research on health promotion, disease prevention, and health disparities that is jointly conducted by communities and researchers.

Critical Issues in Post-Phlebotic Syndrome (RFA-HL-05-014)

Applications due: May 24, 2005

Objective: To support research on venous biology and on post-thrombotic response of the vein wall and valve function, in order to accelerate preclinical studies and develop better management principles for post-phlebotic syndrome.

Heart Failure Clinical Research Network (RFA-HL-05-003)

Applications due: August 16, 2005

Objective: To establish a Heart Failure Clinical Research Network that will expedite clinical research to evaluate the diagnosis, management, and treatment of heart failure.

Infectious Agents in the Origins of Chronic Lung Disease (RFA-HL-05-005)

Applications due: May 17, 2005

Objective: To investigate the contribution of infectious agents or infectious agent-derived bioproducts to the early origin of chronic lung diseases in humans.

Mechanisms of HIV-Related Pulmonary Complications (RFA-HL-04-031)

Applications due: March 16, 2005

Objective: To encourage innovative research on the roles of co-infections, immune factors, and genetic predisposition in the pathogenesis of HIV-related pulmonary diseases.

Myelodysplastic Syndrome (MDS): Seeking Cure through Discovery on Pathogenesis and Disease Progression (RFA-HL-04-033)

Applications due: February 16, 2005

Objective: To encourage basic research on the pathogenesis and disease progression of MDS that can be applied to the development of new therapeutics.

SBIR/STTR Technologies for Monitoring and Performing Resuscitation (PA-04-059)

Applications due: April 1, 2005; August 1, 2005; and December 1, 2005

Objective: To encourage small businesses to participate in the development of new approaches, tools, methods, devices, and biomaterials for monitoring and performing resuscitation.

Sickle Cell Disease (SCD) Clinical Research Network (RFA-HL-05-006)

Applications due: April 25, 2005

Objective: To establish a clinical research network that can translate results from basic and Phase I/II studies into Phase III trials in patients with SCD and when appropriate, thalassemia.

Specialized Centers of Clinically Oriented Research (SCCOR) in Vascular Injury, Repair, and Remodeling (RFA-HL-05-001)

Applications due: May 11, 2005

Objective: To improve prevention, detection, characterization, management, and treatment of vascular diseases by investigating the molecular and cellular mechanisms of vascular injury, repair, and remodeling.

National Heart, Lung, and Blood Advisory Council's Fall Meetings

September 2, 2004

Dr. Barbara Alving noted that two NHLBI programs are recognized officially in September—the Sickle Cell Disease Program and the Cholesterol Education Program.

In the current period of “budget flattening,” the Institute is trying to maintain its funding line for traditional research grants (R01s). In FY 2004 the Institute funded unsolicited R01s through the 25.0 percentile. The Institute expects to issue fewer initiatives in the coming year and will be investigating how to increase efficiency in its clinical trials.

Dr. Charles Peterson presented an overview of the Institute’s sickle cell disease research program. Dr. Elizabeth Nabel highlighted three clinical research areas of major growth at the NIH: stem cell research, sickle cell anemia and pulmonary complications, and cardiothoracic surgery. Dr. Robert Balaban described three ongoing intramural research projects that are using discovery-based tools to fill in the “gaps” in our knowledge about the cardiovascular system. Dr. Warren Leonard reported on research undertaken in his lab on the role of defective cytokine signaling in severe combined immunodeficiency.

At the conclusion of the presentations, Dr. Alving and several NHLBI staff members summarized ways in which the NHLBI fosters interaction between research communities within and outside the NIH—for example, through Cooperative Research and Development Agreements and programs like the Programs for Genomic Applications.

Dr. Lawrence Friedman updated Council members on the NIH Roadmap. Dr. James Kiley presented an overview of the Institute’s Clinical Research Networks. Dr. Robert Lemanske, Jr., Council member and Professor of Pediatrics and Medicine at the University of Wisconsin Hospital, discussed the work of two asthma-related networks—the Asthma Clinical Research Network and the Childhood Asthma Research and Education Network.

Dr. Carl Roth updated the Council on recent policy changes regarding program project grants (P01s) and grant applications with direct costs of \$500,000 or more in any one year.

During the closed portion of the meeting, the Council concurred on the award of 104 grants for a total cost of \$42,383,000.

October 21, 2004

Dr. Barbara Alving thanked the five members who are retiring from the Council: Dr. Melissa Austin, Ms. Sue Byrnes, Dr. Jeffrey Drazen, Dr. Ananda Prasad, and Dr. Pearl Toy. She welcomed the five new Council members who began their terms on November 1, 2004: Dr. Charles T. Esmon, Dr. Katherine High, Ms. J. Hoxi Jones, Dr. Jeffrey McCullough, and Dr. Patricia Wahl.

Representatives from the NHLBI Advisory Committees spoke about the roles of their committees in the Institute:

- Dr. Shelly Carter, Clinical Trials Review Committee
- Dr. Pamela Davis, Board of Scientific Counselors
- Dr. Cheryl Hillery, Heart, Lung, and Blood Program Project Review Committee
- Dr. Theodore Wun, Sickle Cell Disease Advisory Committee

Ms. Sandra Gault gave an overview of the budget. The President’s FY 2005 budget request for the NHLBI, which totals \$2,964.0 million, represents a 3.0 percent increase over last year and is the same total amount as the House Allowance; the Senate Allowance totals \$2,985.9 million and represents a 3.6 percent increase.

The Center for Scientific Review (CSR), NIH, organizes the peer review groups that evaluate the majority of research grant applications sent to the NIH. Dr. Michael Martin, CSR, discussed their projects and activities to improve organizational structure and functioning.

Dr. Alving described the Institute’s plans to work with the Pan American Health Organization to support cardiovascular disease prevention and control in Latin America and the Caribbean region. Dr. Paul Sorlie presented demographic and health information on the Hispanic population in the United States.

Dr. Stephen Mockrin discussed the future direction of systems biology programs within the NHLBI and other Federal agencies.

Twelve new initiatives that were reviewed by the Board of Extramural Advisors in September were presented to the Council, which supported all of them.

During the closed portion of the meeting, the Council concurred on the award of 259 grants for a total cost of \$106,282,000.

The next NHLBAC meeting is scheduled for 8:30 a.m. on February 10, 2005. It is open to the public and will be held in NIH Building 31C, Conference Room 10. The Institute thanks Ms. Sue Byrnes, member of the NHLBAC and director of the LAM Foundation, for her efforts in preparing this summary. Full minutes of Council meetings and summaries of the initiatives are available at www.nhlbi.nih.gov/meetings/nhlbac.

Research Advances from the NHLBI

Breathing Problems During Sleep May Affect Mental Development in Young Children

Results from a study funded primarily by the NHLBI show that 5-year-old children who had symptoms of sleep disordered breathing (SDB) scored lower on standard tests measuring executive function (attention and planning), memory, and general intelligence than other children of the same age without SDB symptoms. Additionally, the children with symptoms of SDB, including frequent snoring, loud or noisy breathing during sleep, or sleep apneas observed by parents, were more likely to have behavioral problems.

The researchers found that the neurocognitive effects were significant even among children who had mild symptoms of SDB, but no actual sleep apneas. Results from this study emphasize the need for parents and pediatricians to watch for breathing problems in young children when they sleep, so that they can be treated to reduce any negative effects on their mental development.

Genetics Play Role in Response to Most Common Asthma Drug

Researchers in the Asthma Clinical Research Network (ACRN), sponsored by the NHLBI, found that over time, participants with mild asthma responded differently to daily doses of inhaled albuterol depending on which form of a specific gene they had inherited. A few weeks of regular use of albuterol improved overall asthma control in individuals with one form of the gene, but stopping all use of albuterol eventually improved asthma control in those with another form of the gene. Albuterol is the most commonly used drug for relief of acute asthma symptoms, or “attacks.”

This is the first study of an asthma drug in patients who were selected according to their genotype. Its findings could lead to better ways to individualize asthma therapy based on a patient’s genetic patterns.

Children with Sickle Cell Anemia Revert to High Risk for Stroke if Transfusions Stopped

A trial examining whether children with sickle cell anemia could safely discontinue their periodic blood transfusions, which reduce their risk of strokes, was stopped by the NHLBI. The Stroke Prevention Trial II (STOP II) began in 2000 with an expected recruitment of 100 patients age 2 to 18. It was stopped two years early with 79 patients enrolled.

At the time the study was halted, 14 of the 41 patients who had been randomly assigned to stop transfusions reverted to high risk of stroke as measured by a special ultrasound technique and 2 patients had suffered a stroke. No strokes or reversions to high stroke risk occurred in the group that continued with transfusions.

In a clinical alert to physicians who treat children with sickle cell anemia, the NHLBI advised that stopping transfusions cannot be recommended. It also urged physicians to discuss with patients and their families the stroke prevention benefits of continuing periodic transfusions and the risks associated with them.

Framingham Heart Study Finds Link Between Obesity and Atrial Fibrillation

The Institute’s Framingham Heart Study identified an apparent association between obesity and the risk of developing atrial fibrillation, a heart rhythm disorder. The investigators divided 5,282 Framingham participants who did not have atrial fibrillation when the study began into three categories of body mass index (BMI): normal, overweight, and obese. Over a period of almost 14 years, the incidence of atrial fibrillation increased as a function of increasing BMI for both men and women.

If confirmed by other observational studies, these results indicate that weight control, in addition to reducing risks for hypertension, diabetes, and other obesity-related complications, may also lower risk of atrial fibrillation.

PIO Meeting Reminder

The 6th Annual NHLBI Public Interest Organization Meeting will be held on February 9. We look forward to seeing you and hearing your suggestions.

2nd Annual *National Wear Red Day*: Taking Women’s Health to Heart

The NHLBI is collaborating with national and local partners to proclaim the first Friday during American Heart Month (February 4, 2005) as *National Wear Red Day*. Show your support by wearing red to raise awareness that more American women die of heart disease than any other cause. For more information on women and heart disease and ideas on how to raise awareness in your community, visit *The Heart Truth* Web site at www.hearttruth.gov.

Upcoming Events

Activity	Date / Location	More Information
American Heart Month	February 1-28	www.americanheart.org
International Stroke Conference	February 2-4 New Orleans, Louisiana	http://strokeconference.americanheart.org/portal/strokeconference/sc/
National Heart, Lung, and Blood Advisory Council	February 10 and June 16 Bethesda, Maryland	www.nhlbi.nih.gov/meetings/nhlbac/index.htm
Congenital Heart Defect Awareness Day	February 14	www.tchin.org/aware
National Sleep Awareness Week	March 28 – April 3	http://preview.sleepfoundation.org/features/NSAW_2005.cfm
The LAM Foundation Research Conference	April 8-10 Cincinnati, Ohio	http://lam.uc.edu

Constituents' Corner

From the Rare Lung Disease Consortium **Conference to Focus on Common Themes in Rare Lung Disease Pathogenesis**

The second annual Rare Lung Disease Consortium (RLDC) Conference will be held in Cincinnati, Ohio, on April 8-10, 2005. The RLDC is a network of rare lung diseases communities, including but not limited to lymphangioleiomyomatosis, alpha 1 antitrypsin deficiency, pulmonary alveolar proteinosis, and pediatric interstitial lung disease. Two additional research communities, representing connective tissue disease-related interstitial lung disease and primary ciliary dyskinesia, will be joining the network this year. All RLDC groups will come together to discuss common themes in rare lung disease pathogenesis, including fibrosis, inflammation, protein misfolding, and autoimmunity. All interested physicians and scientists are welcomed. For more information about the conference and abstract submission, please contact Bethany Barnett at 305-567-9888, Ext. 237, or via e-mail at bbarnett@alphaone.org.

Submitted by Sue Byrnes, Director, The LAM Foundation

From the Allergy & Asthma Network Mothers of Asthmatics

Free Allergic Asthma for Dummies by William E. Berger, MD

Free help for those struggling with allergic asthma is on the way from Allergy & Asthma Network Mothers of Asthmatics (AANMA) — in the form of *Allergic Asthma for Dummies* by William E. Berger, MD. This 48-page mini-book features step-by-step allergic asthma management strategies, as well as information on how to recognize symptoms, avoid triggers, and create an effective management plan. And AANMA brings it to you free of charge. To order copies, call 800-878-4403 or visit www.breatherville.org.

Submitted by Grace Paine Terzian, Director of Communications, AANMA

From the American Association for Respiratory Care **Web Site and Online Column Provide Information on Lung Health**

The American Association for Respiratory Care (AARC) recently launched a new consumer Web site, www.YourLungHealth.org. The site provides information on diseases and conditions that affect the respiratory system, such as alpha 1 antitrypsin deficiency, asthma, chronic obstructive pulmonary disease (COPD), cystic fibrosis, and sleep apnea.

Featured on the Web site is “Ask Dr. Tom,” the online column of Thomas L. Petty, MD. Dr. Petty has devoted his career to helping patients who have emphysema and other forms of COPD. In his column, Dr. Petty will engage in an active dialog with patients and answer their questions in a concise and clear manner, so that patients can learn more about the importance of maintaining lung health. To submit a question to “Ask Dr. Tom” or to see answers to other patients’ questions, visit www.yourlunghealth.org/dr_tom.

Submitted by Sherry Milligan, Associative Executive Director, AARC

We invite you to use this space that we reserve for you to share your successes and opinions. You may submit your ideas and articles to nhlbi.listens@nih.gov or Public Interest News, Office of Science and Technology, Building 31, Room 5A03, 31 Center Drive, MSC-2482, Bethesda, MD 20892-2482.