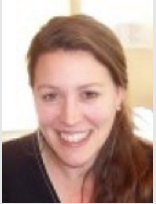


## From Our Executive Director



Betsy Biern

Welcome to the American Asthma Foundation (AAF) newsletter. These periodic messages will keep you informed about the AAF's research program and important asthma news. By way of background, the AAF is the only national organization dedicated solely to eradicating asthma, a chronic condition affecting 25 million Americans. Our mission is to improve treatment, prevent, and eventually find a cure for the disease.

The AAF's research program began 11 years ago to fund, stimulate, and broaden research focused on asthma. According to Program Director Dr. William Seaman, compared with many other diseases, "The treatment of asthma has advanced very little over the past 50 years." Furthermore, despite the prevalence of asthma in all age groups, less than 1% of the budget of the National Institutes of Health is directed to the disease. And among the non-governmental organizations, the AAF is currently the only institution in the US concentrating solely on the search for new and better ways to treat asthma.

Upcoming issues will share our progress with you, including the 26 major advances of which four have progressed to clinical trials for new drugs.

## Introducing Our Executive Director

Welcome to Betsy Biern who joined the American Asthma Foundation in April as Executive Director. Her responsibilities include providing leadership to achieve the Foundation's mission; building a professional development department; reaching out to the community; and working closely with AAF's board of directors.

Ms. Biern came to us from her last position as Vice President for Development at the Brookings Institution in Washington, D.C. Previously, as an executive with Community Counseling Service Co. Inc., a consulting firm specializing in assisting nonprofits with their organizational and fundraising

strategy, Betsy worked with many health-related organizations including New York Presbyterian Hospital and the Global Funds to Fight AIDS, TB, and Malaria.

Betsy earned a Master of Business Administration with a certificate in Health Administration and Policy from the University of Chicago and a Bachelor's degree in English and Art History from Mount Holyoke College. Commenting on Ms. Biern's credentials, Marion O. Sandler, Chairman, noted, "Betsy is an excellent match for the Foundation, because she brings us an extensive background in strategic, managerial, and fundraising leadership."

## Competition Keen for 2011 Awards

The application window for 2011 American Asthma Foundation research awards closed on February 9, 2011. A total of 381 submissions, our second highest ever, came from many fields including biology, epidemiology, immunology, medicine, pathology, pharmacology, physiology, chemistry, engineering, and neurology. Scientists from six countries – the United States, Australia, Canada, Israel, Sweden, and the United Kingdom – are competing for this year's prestigious and highly competitive awards. After reviewing the applications, our distinguished Scientific Review Board found many projects that met our demanding criteria.

Why do we receive so many applications from top scientists, including Nobel laureates, Howard Hughes Medical Institute

Investigators, and faculty at top tier institutions such as Harvard, Princeton, and public universities in California, North Carolina, Texas, and Washington? The answer is quite simple: We challenge them to come up with cutting-edge, creative, high-risk ideas. Additionally, they appreciate our generous grants, simple application process, and the opportunity to meet, mingle, and learn from and collaborate with fellow award recipients.

### Donate Today

*Your donation to the American Asthma Foundation will help us put an end to the suffering caused by this disease. Please send your tax-deductible gift by mail or donate on-line at [www.americanasthmafoundation.org](http://www.americanasthmafoundation.org).*

## Warnings Required on Common Asthma Drugs

Millions of asthma sufferers are prescribed inhaled drugs called long-acting beta-agonists (LABAs) to control their disease. In 2010, the use of some of these drugs was dealt a severe blow when the U.S. Food and Drug Administration (FDA) concluded that LABAs could have life-threatening side effects. The FDA cautioned that extended or improper use of the drugs could lead to hospitalization and even death due to increased risk of severe asthma attacks. Specifically, the FDA required that certain asthma medications, including the four most popular ones (Advair, Foradil, Serevent, and Symbicort) carry warning labels stating that:

- LABAs should never be used on their own to treat asthma, but should be combined with other long-term asthma control medications such as corticosteroids.
- Once asthma is under control, doctors should wean patients off these drugs gradually.
- LABAs should not be used for patients whose asthma is adequately controlled on low or medium dose corticosteroids.

The limitations of the current standard treatments underscore the importance of the American Asthma Foundation's mission to find new, improved, and safer therapies for the disease. Our previously funded research projects have already resulted in 26 major advances, up from 17 a short time ago. Fourteen of these have drawn support from the biotech and pharmaceutical industries and four have progressed to clinical trials. With our proven record of performance, financial support for AAF research is more important than ever.

## Early Excellence Award Attracts Rising Stars



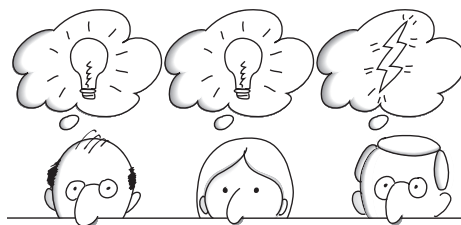
Because our "Early Excellence" awardees may be at the peak of their creativity, it's not surprising that they submit cutting edge proposals. Dr. Joseph DeRisi is the prototype of a brilliant young scientist who received AAF funding.

Dr. DeRisi, a biochemist and computer scientist at the University of California San Francisco (UCSF), was fairly certain that he could identify all known viruses and develop a "virus chip," a glass slide about the size of a band-aid, on which to store them. Because approximately 30% of asthma exacerbation is caused by viral infections, this project could be important in developing new treatments. Dr. DeRisi received a three-year grant in 2002. In just 12 months, Dr. DeRisi was able to build the virus chip. The timing was fortuitous.

The world was being threatened with a major epidemic. SARS (severe acute respiratory syndrome) was rapidly spreading from China to many countries throughout

the world. The underlying cause was unknown, and anxiety was mixed with panic. The DeRisi lab came to the rescue. Unlike lengthy traditional method used by other research facilities, Dr. DeRisi's chip was able to identify overnight the corona virus family virus that caused SARS.

Receiving the AAF research award recognized the potential of this young scientist. Today, he is the director of the California Institute for Quantitative Bioscience's DeRisi Lab which specializes in computational and genomic approaches to tackling difficult diseases, in particular malaria and asthma. For his outstanding work, Dr. DeRisi has received a MacArthur "Genius" Award and designation as a Howard Hughes Medical Institute Investigator, among many other awards.



### Nanotechnology Used to Study Asthma

Once viewed as almost science fiction, nanotechnology involves building minuscule structures and devices at the atomic and molecular level. In 2009, we awarded a research grant to Dr. Michael McAlpine of Princeton University to develop a portable nanotechnology device to study asthma. His goal is to construct miniature sensors to monitor particles in the air that may cause asthma, as well as the chemicals present in exhaled air from asthma patients.

Prior to our grant, nothing like this tool existed. If successful, the device could enhance scientists' ability to study not only asthma triggers, but also asthmatic responses. Additionally, this tiny instrument may help distinguish different types of asthma, allowing better targeted treatments. Dr. McAlpine is already testing a prototype at his Princeton University laboratory.