Tuberculosis (TB) is a contagious airborne infection caused by the organism Mycobacterium tuberculosis. TB primarily affects the lungs, but other organs and tissues may be affected as well. Although current TB rates in the United States are the lowest recorded since national reporting began in 1953, the decline has slowed in recent years. In addition, diverse and foreign-born populations currently bear a disproportionate share of the TB burden. Worldwide, one-third of the total population is currently infected with TB, and an estimated 1.7 million people died from TB in 2009. The slowing decline of TB rates in the United States along with the widespread emergence of drug-resistant strains of the disease highlight the need to maintain focus on eradicating TB through surveillance, treatment and prevention. TB takes a heavy toll on the U.S. economy, with over $1 billion in direct and indirect health care costs per year. The total cost of treating TB in 2009 worldwide was estimated at $4.3 billion.

The American Lung Association is America’s oldest voluntary health organization, founded in 1904 as the National Association for the Study and Prevention of Tuberculosis, and dedicated to combating tuberculosis (TB), the most dreaded disease of the time. In 1907 we launched the Christmas Seals® Campaign that has become an enduring symbol of the power of volunteers to fight illness. Emily Bissell created the first Christmas Seal in 1907 to raise money for a small TB sanatorium. Over a difficult 50-year fight, the Lung Association played a critical role in developing and funding increasingly effective weapons to prevent, detect and treat the disease. TB remains a major public health problem worldwide.

Today, the Lung Association enjoys high levels of awareness and trust from the public, and is well-regarded for basing its prevention, education and advocacy actions on proven science. The American Lung Association continues to include TB as part of its mission and is focused on the following:

- Increasing awareness of TB as a serious cause of disease and death.
- Increasing understanding that TB is preventable and treatable.
- Implementing an advocacy strategy to address TB as a national and worldwide health priority.
- Reducing the health, economic and social burden of TB for patients, their families and caregivers, thus improving their quality of life.

Research
Since 2002, we have funded over $2.2 million on TB research. These TB researchers maintain their focus on tuberculosis and go on to produce important future medical advances. Here are a few examples of TB research projects we are currently funding:

**BOUKE CATHERINE DE JONG, MD, PhD**
New York University, NY
Only a small number of people who become infected with the bacterium that causes tuberculosis will get sick themselves. It is not understood why some people get sick while the majority stays healthy after infection. One way to increase the understanding of immunity to TB is to study differences in “behavior” between different strains of TB and to search for bacterial genes that cause those differences. This study will help development of a TB vaccine.

**EVELINA GUIRADO, PhD**
Ohio State University, Columbus, OH
Tuberculosis (TB) affects one-third of the world’s population and kills nearly 2 million people each year. But with resistance to current treatments on the rise and no reliable vaccine, new treatments are urgently needed. The researchers will study the interaction between the cell wall of the bacterium that causes TB and an immune cell called the macrophage. Information gained from this research should improve knowledge of TB infection and help identify new TB therapy.

**PUSHPA JAYARAMAN, PhD**
Brigham & Women’s Hospital, Boston, MA
The organism that causes TB is able to establish chronic infection in humans and evade the body’s immune system defenses. Different cells of the immune system play an important role in defense against invading bacteria. The researchers will study how immune cells interact with one another to control TB infection and disease. The results of this research should contribute to knowledge needed to develop new treatments and vaccines for TB.
Prevention and Advocacy

The American Lung Association is working to prevent TB by advocating for funding for TB control at the Centers for Disease Control and Prevention (CDC). We also strongly support U.S. funding for global TB control. We also fought for passage of the Comprehensive Tuberculosis Elimination Act and the STOP TB Act, both of which were signed into law in 2008. These laws provide additional tools to address TB both domestically and internationally. The Lung Association is also working with members of Congress to ensure the most challenging TB patients receive the specialized, most effective treatments.

Education and Support

The American Lung Association regularly compiles and publishes Trends in Tuberculosis Morbidity and Mortality, a report that delineates TB surveillance statistics such as incidence, mortality and health care costs. In addition, the American Lung Association tracks tuberculosis’s disproportionate burden on specific communities in our State of Lung Disease in Culturally Diverse Communities report.

The American Lung Association supports lung disease management programs that can help improve skills for health professionals in managing TB and improving surveillance and testing. Patient education is critically important in the treatment and management of TB. The ability to remain compliant with TB treatment and to cope with the anxiety and burdens of this illness over a long treatment period can prove to be daunting for many who suffer from the disease. Nationwide, the Lung Association supports programs to improve treatment compliance as well as improve overall health status, especially as measured by quality of life and increased ability to participate in everyday activities.

The American Lung Association provides education and support to TB patients and their families in a variety of ways in addition to web-based and print sources of information. Many local lung associations offer direct support to TB patients by coordinating housing needs, as well as the distribution of incentives to encourage drug compliance. Through its Lung HelpLine, which is staffed by registered nurses and respiratory therapists, the American Lung Association offers free counseling and support to callers seeking information about TB.

The My Fighting for Air Community is an online volunteer and caregiving coordination service for TB patients and their families who are coping with acute issues related to TB and its treatment. This service is a simple, immediate way for friends, family, colleagues and neighbors to support loved ones in need.

About the American Lung Association

Now in its second century, the American Lung Association is the leading organization working to save lives by improving lung health and preventing lung disease. With your generous support, the American Lung Association is “Fighting for Air” through research, education and advocacy. For more information about the American Lung Association, a Four-Star Charity Navigator Charity and holder of the Better Business Bureau Wise Giving Guide Seal, or to support the work it does, call 1-800-LUNG-USA (1-800-586-4872) or visit www.LungUSA.org.