**Animal Research Means Medical Progress**

**Despite claims by animal rights activists, it is undeniable that animal-based research has contributed to significant improvement in the length and quality of our lives. Following are just a few specific cases in which the use of laboratory animals has been important to medical progress.**

***Indeed, wherever one might stand on the issue, we all benefit from the use of laboratory animals in biomedical research!***

**Cancer** - New cancer drugs account for 50-60 percent of the gains we have made in cancer survival rates since 1975. Overall, these medicines have contributed a remarkable 10.7% of the increase in life expectancy at birth in the United States. Until recently, surgery, radiation therapy and chemotherapy were the dominant treatments for cancer. But now, thanks in large part to animal-based research, there is a new molecular and genetic understanding of tumor biology, leading to treatments that set out to more directly kill cancer cells, which are molecularly different from normal cells. Use of this knowledge to design drugs that focus on those abnormalities is called rational drug design, and is seen by many as the currently emerging future reality of cancer treatment — of "kinder and gentler" cancer therapies that only target abnormal cells.

* Breast Cancer - According to the Carol M. Baldwin Breast Cancer Research Fund, “This Childhood Leukemia Once a virtual death sentence, acute lymphoblastic leukemia (ALL) is the most common of childhood cancers. When St. Jude’s Children’s Research Hospital, founded by actor Danny Thomas, opened in Memphis in 1962, the survival rate was four percent. St. Jude’s revolutionized leukemia therapy and today 80 percent of the children survive. Now, scientists are working to develop even more effective and less-toxic drugs through genetic identification of the major subtypes of childhood ALL.
* Lung Cancer - Lung cancer is the leading cause of cancer death for both men and women in the United States, killing more people than breast, prostate, colon and pancreas cancers combined. A 2001 report from the National Cancer Institute stressed the dire need for research relying on mouse models of lung cancer and focusing on understanding, preventing, and detecting lung cancer and developing novel targeted therapies for treating the disease.

**HIV/AIDS** – A cure has not yet been found for HIV/AIDS, but with new therapies HIV has become a chronic disease, and infected persons are living normal lives for many years. Research, including work with animal models, continues to develop new medicines with fewer side effects, as well as to create vaccine candidates that may one day make HIV infection preventable.

**Heart Disease/Stroke** The progress made in reducing death rates from heart disease and stroke is saving the lives of over one million Americans each year.

* Statins – Millions of people take a statin pill once a day to control their high cholesterol and reduce their risk of heart disease. Statins were introduced in 1987. Doctors believe that if all patients at risk took statins according to guidelines, heart disease would no longer be the number one killer of Americans.
* Nutrition – much of what doctors know about the role of the foods we eat in preventing heart disease and high cholesterol comes from animal studies.

**Diabetes**- 18.2 million people - 6.3 percent of the U.S. population - have diabetes, which is a leading cause of death and disability. Diabetes also affects animals and has been diagnosed in virtually every breed of dog and cat. Several new treatments and medicines, including development of quick-acting and long-acting insulins, and new drugs to treat type 2 diabetes are helping patients manage their disease. Research involving animal models continues to improve treatments for complications including blindness, kidney disease, heart disease and stroke.

**Birth Defects** – Every three and a half minutes, a baby is born with a birth defect in the United States.

* Folic Acid - Studies with animals determined that folic acid, a B vitamin, helps prevent serious birth defects of the brain and spinal cord when taken before conception and early in pregnancy. Since this discovery, a public education campaign launched in 1992 has prevented thousands of such birth defects.
* Surfactant Therapy - One in eight babies in the United States is born too soon. The lungs in many of these premature children are not fully developed. Surfactant is a detergent-like substance produced in the lungs that aids in breathing. Since surfactant therapy became widespread in the 1980s, infant deaths due to respiratory distress syndrome have dropped by over two-thirds. Research supported by the March of Dimes and others continues to seek new, more effective therapies.

**Cystic Fibrosis** – Advances in medical treatment has greatly improved the quality of life and life expectancy of children diagnosed with this inherited disease that affects breathing and digestion. While at one time CF almost invariably killed babies, most of those affected now survive to their mid-30s, though some die in childhood and others live to age 40 or beyond. The abnormal gene that causes CF was discovered in 1989. A number of new drugs that aim to prevent or treat infections in those with CF are currently being tested. However, there is still no cure. Research, including the use of animal models, must continue if a cure is to be found.