The goal of Intermountain Research and Medical Foundation is to lead Intermountain Healthcare in providing resources for the saving of lives by:

- Providing seed money for worthy research projects that will ultimately lead to clinical application;
- Educating the community concerning life-saving medical research;
- Raising the standards of health and healthcare, helping people live the healthiest lives possible.

RESEARCH IMPACT

Important Heart- and Lung-Related Medical Research Funded by Generous Donors

Learn more at intermountainheartinstitute.org/research

Using Precision Medicine to Fight Coronary Artery Disease – Precision Medicine uses genetic testing to optimize patient care by pinpointing genetic-specific treatments for patients. A recent gift to the Intermountain Medical Center Heart Institute will lead to improved treatment for coronary artery disease (the No. 1 killer of men and women in the U.S.) through a promising strategy called molecular targeting. Molecular targeting uses genetic sequencing to discover, analyze and map genes related to heart disease. Researchers can then identify locations where the disease process can be interrupted to prevent or improve outcomes of the disease.

Preventing Heart Disease in Diabetic Patients – Through money contributed by donors, cardiovascular researchers demonstrated that people with diabetes, who are at high risk for developing heart disease, are more appropriately treated through proper diabetes management instead of using high-tech angiography screening. This is a major finding that has the potential to affect millions of patients and save millions of dollars in healthcare expenses.

Using Electronic Tools to Better Treat Pneumonia – Donor contributions aided pulmonary researchers in developing an electronic tool to help diagnose and treat patients with pneumonia who visit the emergency department. Their research has the potential to reduce mortality for the more than 1 million patients treated for pneumonia in the U.S. each year.

Effects of Stressful Events on DNA – Telomeres are a segment of DNA at the ends of chromosomes, the length of which determines a cell's lifespan. With donated funds, cardiovascular researchers completed a study showing the negative effects that a stressful event may have on the health of a community. Following the events of 9/11, researchers saw a decrease in the length of telomeres in the study population, along with an increase in minor heart attacks. This was the first telomere study showing the effects of a single event on a community.

Sepsis Research – Donor contributions have supported research on septic shock, a life threatening infection that is both common and often lethal. One of the most frequent and disabling outcomes from septic shock is neurocognitive impairment, yet the causes of sepsis-associated neurocognitive impairment are not yet clear. Research was conducted to understand the causes and evolution of cognitive impairment after septic shock. Additional research was conducted to try to understand how the bodies of patients with sepsis behave on their own and in response to therapies. This information has allowed clinicians to better understand the way the body controls heart rate and blood pressure in response to sepsis infections, more accurately triage sepsis patients, and improve the application of specific therapies to particular patients.

Emphasizing Individuality and Humanism in the ICU – The team at the Center for Humanizing Critical Care uses rigorous research methods to foster personalized support and clear communication between patients, their families, and clinicians. Foundation funding has allowed Center researchers to discover that ICU family members are experiencing high rates of biological stress while their loved one is in the ICU, and that stress is closely tied to the development of severe anxiety. In addition, Center researchers have identified coping profiles among ICU family members, which allows improved personalization of support. This research sets the stage for studies of interventions to eliminate needless psychological injury related to the ICU. Ongoing projects also study the impact of including families in all aspects of care in the ICU. The Center has become a world leader in the study and development of innovative strategies that will revolutionize patient and family-centered care.

Less Invasive Heart Surgery – New technology is providing more opportunity to treat valvular heart disease and atrial fibrillation. Cardiac surgery and cardiology researchers are collaborating on studies comparing traditional open heart surgery for valve replacement with catheter-based valve implantation. Electrophysiologists and surgeons are conducting research on "hybrid" therapy for atrial fibrillation, which combines video-assisted surgical ablation with catheter ablation to reduce the recurrence of arrhythmias.