

The Lerner Research Institute

Friends of the LRI

Fall 2008

How do you plan to make a difference in the world today – and tomorrow?

Dear Friends:

It's hard to believe that another year has gone by and that as we approach the winter holidays and end-of-the-tax year that we are once again contemplating our charitable giving. For those of us at the Lerner Research Institute this is also an opportunity to look back on the past 12 months and evaluate our contributions to curing disease as well as to formulate where we want to be in 2009.

Traditionally, most end-of-year letters focus on major advances made within that time period. For this end-of-year letter, however, we are going to not only focus on our achievements of today, but we will also be focusing on the research of tomorrow. Research that truly has the potential to make a difference in your lives and in the lives of those that you love.

Inside you will find short articles about high-risk cutting edge research that is taking place in our Department of Stem Cell Biology and Regenerative Medicine. This Department has a new Chair, Jeremy Rich MD, a renowned researcher who investigates cancer stem cells in brain tumors and novel treatments aimed at slowing brain tumor growth. Dr. Rich will be recruiting about 10 new Faculty over the next five years to build a department with about 100 new employees.

Stem cell research holds significant promise for a range of debilitating diseases such as cardiovascular diseases, metabolic diseases such as diabetes, to cancers, neurodegenerative diseases such as multiple sclerosis, and bone

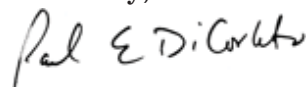


repair, to name just a few.

Friends, 2008 year will certainly go down as an historic one for the LRI and as we look back on a remarkable year, we see a healthy and vibrant tomorrow because of your philanthropic giving and commitment. Looking ahead, there are both opportunities and challenges.

One significant challenge on everyone's mind is the possible cut in federal funding for medical research – a possibility that we will certainly face in the upcoming year due to the economic downturn. This coming year, more than ever, your philanthropic support is needed. By investing in the Institute, you help translate our research into innovative healthcare that improves people's lives today and tomorrow. From the discoveries in the research lab to their delivery to the bedside, improving the lives of families everywhere is the goal – something the researchers and physician-scientists at the Institute take very seriously. With your help, one gift, one disease at a time.

Sincerely,



Paul E. DiCorleto, PhD
Institute Chair

Medical Research – Meeting Great Expectations

Many of you have either heard me say this or have read it in previous articles and letters that I have written – “medical research is in the business of meeting great expectations.” That’s what we attempt to do here at the Lerner Research Institute – to meet expectations of those living with disease by offering hope.

When I struggle to explain to people what we do here, this is the line that I find myself using over and over again. We all know that hope is no substitute for real evidence. That’s why medical research being conducted here at the Institute is such a critical component of your health care today and tomorrow.

Nowadays one can’t use the words hope and medical research without bringing the oftentimes controversial topic of stem cell research into the conversation. Controversy aside, benchside advances in stem cell research have made it possible for today’s physicians to contemplate new and effective treatments and cures for diseases that have afflicted mankind over centuries – from heart disease, diabetes, Parkinson’s and Alzheimer’s to conditions such as cancer that affect every family. The hope of a cure is slowly becoming a reality.

However, the science of stem cell research can only deliver hope if it thrives in a supportive environment.

Inside this *Friends* edition, you will read about



Alicia Hoose, MPA
Director of Development

some ongoing high-risk cutting edge research projects going on right now at the Lerner Research Institute that utilize adult stem cells. Each of these laboratories is in need of your financial support.

As you contemplate your end-of-year giving strategy, I ask you to please consider making a donation to one of these projects or to the countless other medical research projects being conducted here. Together, my friends, donors and researchers are a formidable team. Your financial support assists researchers to give hope – to millions of people around the world – by providing real evidence of techniques, tests and treatments that change and save lives.

Your gift helps to make the hope of today a reality for tomorrow. Please give.

The mission of the Lerner Research Institute is to promote human health by investigating the causes of disease and discovering novel approaches to the prevention and treatment of disease. The Institute is also committed to the training of the next generation of biomedical researchers and to productive collaborations with those providing clinical care.

Stem Cell Research: New Hope From the Laboratory to the Bedside

§ After a person suffers a heart attack, the body sends out a distress signal directing the patient's own as-yet undefined stem cells to go to the heart. There they "differentiate" into heart tissue cells and start to repair the damage. The trouble is, after a short period of time, this homing signal ends and the body stops repairing itself.

Is there a way to keep that signal on – or even to turn it back on later – so a patient's heart heals more naturally, efficiently and quickly?

Marc Penn, MD, PhD, is investigating ways to influence a patient's own stem cells to travel to the site of the injured heart tissue. The stem cells then continue the tissue healing.

§ For many years, the conventional wisdom has been that each cancer cell in tumor tissue equally contributes to the disease. But could there be another aspect to cancer that has evaded understanding?

S. Jaharul Haque, PhD, investigates whether brain cancer cells that have the same properties as stem cells (called cancer stem cells) could be why glioblastoma multiforme (GBM) is so deadly. GBM is by far the most common and malignant of the tumors affecting the central nervous system.

A new view is that of all the cells that comprise a tumor, only a few have the properties of stem cells. You can kill as many of the "differentiated" cells that make up the bulk of the tumor as possible, but the tumor will more than likely redevelop aggressively if any of the cancer stem cells survive.

The focus of possible GBM therapies is to

target this "minor population" of cancer stem cells capable of maintaining tumor growth.

"Eradicating the bulk of the tumor cells that are unable to maintain the tumor might reduce its size, but it won't cure the disease," Dr. Haque said. "It's important to kill that minor population."

§ The US Army Medical Research and Materiel Command formed the Armed Forces Institute of Regenerative Medicine (AFIRM), and several Institute clinicians and researchers will play a key role in this important new federal initiative to treat the most critically wounded US service members involved in Operation Iraqi Freedom and Operation Enduring Freedom.

The goal is to accelerate the development of new technologies in the field of regenerative medicine and tissue engineering to effectively serve the needs of injured service members. The research and development of new therapies will focus on the regeneration of bone, muscle, tendon, nerve and blood vessels, as well as new methods for transplantation of limb and facial tissue and the treatment of burns. George Muschler, MD, Biomedical Engineering and a Cleveland Clinic orthopaedic surgeon, is AFIRM's Co-Principal Investigator.

"The AFIRM team is deeply committed to offering new recovery options for the brave men and women who have served our country," Dr. Muschler said. "Our collaborative mission is to translate opportunities that are now available in regenerative biology as quickly as possible into practical tools that can be used on the front lines or here at home."

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There are several ways that you can support The Lerner Research Institute. For more information, please contact Alicia Hoose at 216.444.1821.

Annual Giving Perhaps the easiest form of giving and the one with the most immediate impact is outright donations of cash or real assets, such as stocks, bonds and property (including real estate and tangible personal property like artwork).

Endowments Donations of cash and real assets are used to create permanent support and to help attract new, vital talent to The Lerner Research Institute. Endowed support can create chairmanships, endowed chairs that support researchers within departments, fellowships, lectureships, research and education programs, and funds for departments that otherwise might be unavailable.


Planned Gifts A variety of long-term, planned giving options (charitable remainder trusts, bequests and gift annuities) can support research for many years.

Naming Opportunities Benefactors can create a lasting legacy by arranging for the naming of buildings, laboratories and other facilities. One example is the Center for Genomics Research building, which opened in Spring 2005.

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