



Annual Colloquium Focused on Cancer Research

NOTED RESEARCHER AND MEMBER OF NOBEL ASSEMBLY IS FEATURED SPEAKER

On Wednesday, April 12, 2006, the Lankenau Institute for Medical Research (LIMR) held its Sixth Annual Research Colloquium, **Prognosis to Progression in Cancer**. This year's Colloquium focused on cancer research and featured keynote lecturer Anders Zetterberg, M.D., Ph.D., a Professor in the Department of Oncology-Pathology at the Karolinska Institute, a member of the Nobel Assembly, and a Trustee of the Nobel Foundation.

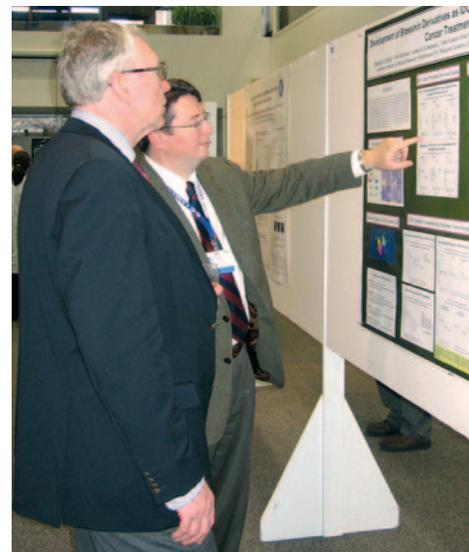
Dr. Zetterberg's talk entitled *Chromosome Instability and Tumor Progression* centered on chromosomal instability and the factors that are essential and rate limiting for tumor progression. Human tumors can be divided into two major groups called A-tumors or D-tumors. The A-tumors develop distant metastases rapidly and usually these patients succumb to their disease within a few years, while patients with D-tumors can survive with distant metastases for a decade or more. Dr. Zetterberg discussed this distinction and also how his research has the potential to uncover powerful prognostic indicators for breast and other cancers.

The program also included introductory lectures from, Terri McHugh, D.O. and U. Margaretha Wallon, Ph.D. Dr. McHugh is a physician in the Department of Hematology and Medical Oncology at Lankenau Hospital and Medical Director of the Hospital's Cancer Genetics and Risk Assessment Program. Her lecture entitled *Cancer Genetics and Risk Assessment* focused on current diagnostic

markers for patients with breast cancer. Dr. Wallon, a scientist at LIMR gave a lecture entitled *Prognostic Markers in Breast Cancer* that described prognostic markers discovered in her laboratory that may be useful for determining the best course of treatment for patients with breast cancer.

The day concluded with a poster session and reception in the LIMR atrium. This included almost 30 posters focused on the areas of cancer, cardiovascular disease, and aging from scientists at LIMR and physicians from Main Line Health.

This program was designed not only to appeal to researchers and clinicians, but to educate the local community about the research that is occurring right here at the Lankenau Institute for Medical Research. Next year's Colloquium speakers will focus on research relating to cardiovascular disease. If you would like to be invited to next year's Colloquium or put on our mailing list, please contact, Tava Shanchuk at shanchukt@mlhs.org or (610) 645-3429. ☼



Dr. Prendergast (r) discusses his Cancer Research with Dr. Zetterberg (l) at the Poster Session



Over 70 people attended this year's Lectures and Poster Session



2006 Colloquium Speakers (l to r), Dr. Terri McHugh, Lankenau Hospital, Dr. Anders Zetterberg, Karolinska Institute, and Dr. U. Margaretha Wallon, LIMR



George C. Prendergast, Ph.D.
Professor, President and CEO
Lankenau Institute for Medical Research

LIMR's RIME Values Marketing and Development

In previous columns, I have written about how the value of LIMR to Main Line Health (MLH) centers on a set of core "RIME" values – Research, Intellectual Property, Marketing/Development, and Education. In earlier essays, I discussed the values of Research and Intellectual Property, leading us now to the third value of Marketing/Development.

At LIMR, marketing encompasses communicating information about our work to different members of our community. Similarly, development encompasses all our fund-raising activities, including philanthropy and commercial activities, both of which raise needed funds to sustain our ongoing work. These two values are linked, because in order for LIMR to be effective in development, we must communicate what we do, why it is important, and what our discoveries and successes are. Additionally, LIMR's marketing and development activities help illustrate MLH's commitment to health care, not only by providing the highest quality care, but also by supporting research, education, and training activities that are needed to continually improve it.

LIMR has an almost 80-year history of excellence in research, but knowledge about us is fairly limited, even within MLH. To strengthen our value in this area, the Institute has recently added two major new positions. I am pleased to announce that J. Todd Abrams, Ph.D., Director of Philanthropy and Business Development, and Tava Shanchuk, Manager of Public Relations, have joined the remarkable group we have in place at the Institute.

Tava will focus on increasing public awareness of LIMR, our researchers, and our interactions with other MLH groups. Our goal is to make people in this region aware of the tremendous research that is happening in their own backyard. Todd is tasked with expanding our individual philanthropy program, capitalizing on LIMR's discoveries, and partnering with suitable companies inside and outside LIMR. His work aims to develop new funding sources to keep our "discovery engine" going and to perform the work needed to translate our most exciting discoveries into the clinic. ❁

LIMR Researcher Receives Lance Armstrong Foundation Grant



Dr. Alexander J. Muller, LAF Grant Recipient

Dr. Alexander Muller, Assistant Professor at LIMR, received a three-year grant totaling \$247,500 from the **Lance Armstrong Foundation (LAF)**. His research project entitled, *Primordial Germ Cell Tumor Susceptibility at the Pgc1 Locus*, will focus on identifying genetic mutations that may play a role in testicular cancer. LIMR was one of 20 Institutions across the country to receive cancer survivorship and testicular research grants from the LAF, which seeks to inspire and empower people affected by cancer. Founded in 1997 by cancer survivor and champion cyclist Lance Armstrong, the LAF is located in Austin, Texas. For more information, visit www.livestrong.org.

The research project focuses on primordial germ cells, the cells responsible for carrying the genome from generation to generation. Normal primordial germ cells have more in common with cancer cells than any other cells in the body and can actually form tumors when removed from their normal environment and implanted at another site. Studying the genetic basis of testicular tumor susceptibility will lead to a better understanding of how the tumor-forming capacity of these cells is normally kept in check and may provide key insights into the general process of tumor development. Dr. Muller has identified the *Pgc1* testicular tumor susceptibility locus on mouse Chromosome 13 and is currently combining genetic mapping with candidate gene evaluation to find and study the mutated gene. ❁

NSABP Approves Breast Cancer Prognosis Study

The **National Surgical Adjuvant Breast and Bowel Project (NSABP)** tissue bank will be supplying a large panel of breast biopsy tissues to LIMR Scientist, Dr. Maggie Wallon. These tissues, obtained in part from Drs. Ned Carp and Thomas Frazier at Main Line Health, will support the analysis of a unique set of markers discovered in pilot studies in Dr. Wallon's laboratory in order to predict the course of breast cancer and determine the most effective type of therapy. The NSABP is a clinical trials cooperative group supported by the National Cancer Institute (NCI). ❁

Oncologic Foundation Grant Supports Graduate Student

A grant in the amount of \$18,228 from the **Oncologic Foundation of Buffalo** will support Lisa Murray, a graduate student from St. Joseph's University. Lisa will work in the laboratory of Dr. James Mullin, a professor at LIMR performing esophageal cancer research. The project entitled: *"Molecular Mechanisms of Sucrose Leak in Barrett's Esophagus"* is aimed at improving the early diagnosis and therapeutic treatment of esophageal cancer. Lisa, a Havertown resident, is graduating from Saint Joseph's University in May with a B.S. in Biology and will begin graduate school this fall. ❁



St. Joseph's University student Lisa Murray (l) with Dr. Mullin (r)



Research Technician Gwen Gilliard with the New Tissue Processor

New Equipment Grant Strengthens Research Program

The **Scholler Foundation** awarded the Lankenau Institute for Medical Research a grant for \$25,000 that went towards the purchase of a new Tissue Processor, replacing an outmoded, 13-year old machine in LIMR's Histology Department. Scientists at LIMR rely on specialized equipment to advance their study of cancer and cardiovascular disease. This is often done by histological examination of healthy and diseased tissues. This new tissue processor is essential for the preparation of materials for morphological and molecular analysis and will be utilized by 11 research teams here at LIMR. ❁

Grant Award Helps Breast Cancer Research Continue

Dr. Margaretha Wallon, a scientist at LIMR received a three-year commitment of \$39,000 from the **Martha W. Rogers Charitable Trust** to support her breast cancer research, *TIMP-4: Predictive Marker and Treatment Option for Breast Cancer Recurrence*. This seed funding will allow Dr. Wallon to investigate the role of TIMP-4, a protein that may regulate cellular functions involved in breast tumor progression. Results from this research could lead to improvements in breast cancer therapy, including the development of a new medication. Working with Dr. Wallon on this project is Michaelann Liss, D.O., a Hematology/Oncology Fellow at Lankenau Hospital and Nandhini Sreedhar, M.D., a Resident in Internal Medicine also at Lankenau Hospital. ❁



Dr. Wallon inspects cell plates in the lab

Cardiovascular Research Advances with Help of Grant Awards

Dr. Lisa Laury-Kleintop, Assistant Professor at the Lankenau Institute for Medical Research received a three-year, \$295,000 grant from the **W.W. Smith Charitable Trust** and grants totaling \$8,000 from the **R&R Mellinger Medical Research Memorial Trust** and the **Alice Livingston Trout Family Trust** to support two cardiovascular research projects at LIMR. Cardiovascular disease, which includes such conditions as high blood pressure, heart attack, and stroke, is the leading cause of death in the United States. Medications known as statins, work effectively to lower cholesterol and have also been found to have additional cardiovascular benefits, but little is known about the exact reason for these added benefits.

The W.W. Smith Charitable Trust is supporting her project entitled: *RhoB-directed SMC Growth and Atherosclerotic Lesion Formation*. This research is exploring the ways in which RhoB and statins regulate smooth muscle cell growth. Recent studies have revealed that RhoB is strongly upregulated by statins, but the role of this protein in cardiovascular disease or statin responses is not well defined. This project offers a unique opportunity to assess the role of RhoB in statin therapy and may provide insight into how statins offer additional benefits in addition to cholesterol lowering.

Funding from the Mellinger and Trout Trusts will focus on combination drug research for the treatment of cardiovascular disease. More specifically, Dr. Laury-Kleintop will examine two commonly used drugs, statins and farnesyl-transferase inhibitors (FTIs), and how they interact when dispensed together. This research will be useful in determining how statins and FTIs can be best administered to maximize each drug's efficacy for improved treatment of cardiovascular disease. ❁



Dr. Lisa Laury-Kleintop
LIMR Assistant Professor



J. Todd Abrams, Ph.D.
Director of Philanthropy and
Business Development

Bridge to the Future

We are rapidly moving forward with our effort to bring new medicines and tests to patients in our community through the creation of a technology incubator right here at LIMR. This endeavor involves taking a new look at ongoing projects in our laboratories for potential clinical applications. We are also inviting brand new companies from around our region to start their businesses at LIMR. By inviting outside ventures to come here, we bring both entrepreneurial experience and new collaborators to our campus.

To accelerate the technology development process, and to provide additional resources and expertise, LIMR has joined in an application to form a new Keystone Innovation Zone (KIZ). This innovative program developed by the state hopes to help new companies grow and stay right here in Pennsylvania. This application has been submitted together with a dozen academic and corporate partners such as Fox Chase Cancer Center, Temple University, BioStrategy Partners, Citizens Bank of Pennsylvania and Trinity Capital Advisors, to name just a few. Our goal is to bring new jobs and opportunity to our community as well as improve the lives of individuals suffering from cancer or heart disease. ❁

DO YOU SUFFER FROM ATRIAL FIBRILLATION? Clinical Trial Now Accepting Patients

At LIMR, one of our goals is moving our discoveries from the laboratory bench to the patient bedside, often times partnering with physicians from Main Line Health (MLH). In order to continue to strengthen this work, LIMR and MLH were able to recruit Michael D. Ezekowitz, M.D., Ph.D., an internationally known cardiologist with special expertise in echocardiology, thrombosis and atrial fibrillation, to serve as Professor and Vice President at LIMR and Vice President of Clinical Research within MLH in July 2005.

Dr. Ezekowitz is currently co-principal investigator for a Phase III international clinical trial to evaluate an experimental anticoagulation drug for the prevention of stroke in patients with atrial fibrillation. This three-year study entitled: *Randomized Evaluation of Long Term Anticoagulant Therapy (RE-LY) with Dabigatran Etxilate* or simply the RE-LY™ study is being conducted by one of the world's 20 leading pharmaceutical companies. The planned total enrollment for this study is 15,000 patients from almost 1000 study centers worldwide.



Dr. Michael Ezekowitz
Professor, Vice President
LIMR, and Vice President
of Clinical Research for
Main Line Health

Atrial fibrillation is the most common form of cardiac arrhythmia affecting 2.2 million Americans and accounting for 15% of all strokes. Currently, therapeutic options for the prevention and treatment of thromboembolic disease is limited. The most common used medication, warfarin, also known as Coumadin® has been on the market for over 50 years and patients must be closely monitored due to interactions with food and other medications. This new oral anticoagulant therapy

being tested hopes to provide patients with a medication that can be used long-term with little monitoring, providing predictable and reliable protection for patients at risk of thromboembolic events, with a low risk of bleeding.

Dr. Ezekowitz is currently accepting patients for the study at the Lankenau Hospital. For more information or to find out if you are eligible visit: <http://www.limr.org/html/ccvr.htm> ❁

IN MEMORIAM



Dr. Vincent J. Cristofalo

Professor and Past President of Lankenau Institute for Medical Research

Dr. Vincent Cristofalo, an internationally renowned leader in aging research and one of the pioneers of the field of cellular gerontology, passed away on Monday, May 8, 2006, at the age of 73. For almost 50 years, Dr. Cristofalo dedicated his life to studying the mechanisms involved in cell aging. Two of his key findings suggested that the expression of genes change as cells age and that aging cells lose their ability to transmit signals to grow because of faulty transmission of signals from cell membrane to nucleus. He was trying to understand growth control in normal cells as well as in cancer cells

in an effort to defer age-associated disease and extend the "health span" in human life. In his own words he once stated: *"We are not trying to increase the life span; we want to increase the health span. People say they want to live longer, but what they mean is they want to live longer in good health."*

In addition to his commitment to research, Dr. Cristofalo was a mentor and teacher who devoted time to educating others. This is apparent in the over 60 scientific and public lectures he had given in just the past five years. Current LIMR President and CEO, George C. Prendergast stated: *"We have suffered a great loss today, one that will resonate not only here at LIMR and throughout the local research community but nationally and internationally for all individuals involved in aging research. His lifelong quest will be continued by the many people that he has trained and mentored over the years with the hope that one day his dream may be realized and people will live longer, healthier lives."*

Dr. Cristofalo was a graduate of St. Joseph's College in 1955 with a B.S. in Biology and Chemistry; Temple University in 1958 with a M.A. in Physiology; the University of Delaware in 1962 with a Ph.D. in Physiology and Biochemistry; and completed postdoctoral work at Temple University Medical School. Throughout his career, he worked at the Wistar Institute, the Center for the Study of Aging at the University of Pennsylvania, Allegheny University of the Health Sciences, the Center for Gerontological Research at MCP Hahnemann School of Medicine, and finally the Lankenau Institute for Medical Research.

He is survived by his wife of 42 years, Margaret, six loving daughters, and four grandchildren.



Main Line Health

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Medical Research

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