Lankenau Medical Research Center

Vincent J. Cristofalo, PhD*
The mission of the Lankenau Medical Research Center (LMRC) is to conduct research and research training in the biological mechanisms of aging and diseases associated with aging, including but not limited to cancer, cardiovascular disease, osteoporosis and age-related neurodegenerative disorders. The focus of this research is to improve the health and quality of life for all, with particular emphasis on older persons.

From its inception in 1927, the LMRC has concentrated on the mysteries of cell growth and dysfunction, relating its findings to important advances in cancer and cardiovascular disease. In recent years the research emphasis has broadened to include Alzheimer’s disease, stroke, and osteoporosis. Collectively, these diseases are the focus of a highly talented scientific team at LMRC that is investigating what properties aging itself brings to our vulnerability to disease.

Since 1993 the Lankenau Medical Research Center has occupied a 67,000 square foot, 16-laboratory building constructed as the capstone to Lankenau Hospital in suburban Wynnewood, where the medical complex had moved in 1953. The LMRC became one of the few free-standing medical research sites in the Mid-Atlantic regions, aligned with three acute care hospitals (Lankenau, Bryn Mawr and Paoli Memorial Hospitals) and one rehabilitation hospital (Bryn Mawr Rehab in Malvern) as a part of Main Line Health, well positioned to lead a coordinated attack on the diseases of aging.

The effort received greater impetus with the appointment in 1999 of Vincent J. Cristofalo, PhD, as President of LMRC, and the transfer of 23 new scientists and support staff to expand the mission in molecular, cellular and developmental biology.

For many years, the scientists at LMRC have formed partnerships in clinical research with physicians active in the hospitals of Main Line Health. Physician and surgeon investigators contribute individually and cooperatively to the work of the research facility. In three areas specifically - the Main Line Health Stroke Program, the Community Clinical Oncology Program and the Morbidity and Mortality in Hemodialysis Program - LMRC is both grantee organization and sponsor of the research. The latter two programs are funded by the National Institutes of Health. A full listing of the many clinical research programs underway is available by calling or writing the research center.

LMRC is one of the biomedical research anchors of the Jefferson Health Senior Health Institute, a health-related initiative of The Jefferson Health System. As such it will foster a reliance on research excellence to provide the underpinning for an array of preventive, educational and diagnostic programs aimed at older adults and their caregivers throughout the southeastern Pennsylvania region.

**The Nathan Shock Center of Excellence in the Basic Biology of Aging**

As a result of Dr. Cristofalo’s move and the transfer of a major grant, LMRC and Thomas Jefferson University have been designated as one of five Nathan Shock Centers of Excellence in the Basic Biology of Aging by the National Institute on Aging (Nathan Shock was the first Director of the Aging Program at the National Institutes...
of Health). The $2 million grant over four years is tied to the designation. The other four designated institutions include Harvard University, The University of Michigan, the University of Texas at San Antonio, and the University of Washington.

The title of this grant is: “Dysregulation during Aging: Molecules, Cells and Tissues.” Currently three overlapping and interrelated research themes underlie the program of the LMRC Shock Center:

- functional changes in excitable tissues, such as nerve, muscle and heart, including dementing diseases such as Alzheimer’s disease;
- changes in the regulation of gene expression with aging, including those changes leading to age-associated diseases such as cancer, atherosclerosis, osteoarthritis and others; and
- mechanisms of regulation of the declining function of the immune system.

The grant supports five core resource units around which the research program is structured.

**Animal Core** - offering properly housed and genetically defined rodents of different ages to qualified researchers.

**Brain Bank Core** - makes available brain tissue from patients with neurodegenerative diseases as well as healthy controls.

**Cell and Tissue Core** - involves expanding an existing human cell bank.

**Research Development Core** - identifies outstanding new investigators interested in aging, guides them through early stages of their careers, and provides partial salary support.

**Program Enrichment Core** - provides funding for outstanding investigators in aging for consultation and lectures.

The LMRC is a freestanding subsidiary of Main Line Health. The presence of the Research Center contributes to the atmosphere of a commitment to excellence within Main Line Health and ultimately enhances the quality of patient care.

For detailed information on the LMRC, please access our website at: [www.jeffersonhealth.org/lh/lmrc](http://www.jeffersonhealth.org/lh/lmrc).

**About the Author**

Vincent J. Cristofalo, PhD, is President of the Lankenau Medical Research Center.