

Heart Disease Linked To Too Much Cholesterol In Cell Organelle (www.whatsyourph.com)

Main Category: [Heart Disease](#)

Also Included In: [Cholesterol](#); [Statins](#)

Article Date: 03 May 2007 - 11:00 PDT

Scientists have shown that a build-up of cholesterol in cell organelles called lysosomes is related to a higher incidence of heart disease.

Atherosclerosis, a heart disease in which fat accumulates in arteries and blocks blood flow, is the leading cause of death in the Western World. One hallmark of the disease is the presence of cells called macrophage foam cells, in which cholesterol accumulates. Scientists are now trying to understand how cholesterol builds up in these cells, especially in cellular organelles called lysosomes that are known for degrading cholesterol.

W. Gray Jerome and colleagues noticed that when cholesterol accumulates in lysosomes, they become more acidic, which makes them less active. The lysosomes become unable to degrade all the cholesterol that comes in, and more cholesterol accumulates over time. These observations suggest that restoring the acidity of lysosomes may be a promising way to clear up arteries from cholesterol and to potentially prevent heart disease.

Article:

Effects of Cellular Cholesterol Loading on Macrophage Foam Cell Lysosome Acidification

Brian E. Cox, Evelyn Griffin, Jody C. Ullery, and W. Gray Jerome

Published in the May 2007 issue of the [Journal of Lipid Research](#) (Vol. 48, No. 5)

The **American Society for Biochemistry and Molecular Biology** is a nonprofit scientific and educational organization with over 11,900 members in the United States and internationally. Most members teach and conduct research at colleges and universities. Others conduct research in various government laboratories, nonprofit research institutions and industry. The Society's student members attend undergraduate or graduate institutions.

Founded in 1906, the Society is based in Bethesda, Maryland, on the campus of the **Federation of American Societies for Experimental Biology**. The Society's purpose is to advance the science of biochemistry and molecular biology through publication of the *Journal of Biological Chemistry*, the *Journal of Lipid Research*, and *Molecular and Cellular Proteomics*, organization of scientific meetings, advocacy for funding of basic research and education, support of science education at all levels, and promoting the diversity of individuals entering the scientific work force.

For more information about ASBMB, see the Society's Web site at www.asbmb.org