

## **The Foundation for the NIH Biomarkers Consortium Launches A Multi-Stakeholder Atherosclerosis Modeling Project**

**Bethesda, MD** (September 5, 2012) — The Foundation for the National Institutes of Health (FNIH) Biomarkers Consortium announces that it is launching a two-year effort to use computer modeling to better understand heart disease and the potential effectiveness of medicines used to treat it. The project will integrate large amounts of available information on different measures (or “biomarkers”) of atherosclerosis.

Atherosclerosis, a condition in which an artery wall thickens as a result of the accumulation of fatty materials such as cholesterol, is the cause of heart attacks and strokes. The study will establish a computer-based model that will help determine whether certain short-term measures can predict longer-term patient outcomes in the progression and treatment of the disease, and improve clinical trial designs used to test new treatments.

Heart disease is the leading cause of death for both men and women in the United States and most developed countries. Based on figures from 2008, more than 2,200 Americans die each day from cardiovascular disease, totaling one third of all deaths in the country. According to a 2012 American Heart Association report, the direct and indirect costs of heart disease and stroke total nearly \$300 billion, which is a significant healthcare expense. “Enabling a better *in silico*, or computer model of atherosclerosis that predicts clinical outcomes would have a significant public health benefit,” said Dr. Steven Paul, Chairman of the Biomarkers Consortium Executive Committee.

While there is a substantial amount of biomarker data available in scientific journals and clinical trials databases, it is highly fragmented. “Most of these biomarkers have been studied one at a time, and only measure a specific aspect of atherosclerosis,” said Dr. David Fryburg, Project Team Chair and Principal Consultant, ROI BioPharma Consulting. “Integrating these into a comprehensive computer-based disease model will allow us to identify those short-term measures which best predict long-term clinical outcomes like heart attack and stroke. Successful development of this model can facilitate more confident testing of new therapies for atherosclerosis and prevention of cardiovascular disease.”

The effort is the fourteenth project launched to date by the Biomarkers Consortium, a public-private partnership managed by the FNIH, and brings together cardiovascular disease experts and computer modelers from leading academic institutions, the National Institutes of Health, Food and Drug Administration, the pharmaceutical and food industry to develop and execute the project. Consortium members providing financial support to the Atherosclerosis Modeling Project include Amylin Pharmaceuticals, Eli Lilly and Company, Pfizer Inc., Takeda Global Research & Development Center, Inc. and the Dairy Research Institute®, with additional support from Quintiles. Entelos Holding Company, a modeling and simulation software and services firm, was selected to provide the software platform and computer modeling expertise for the project.

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**About the Foundation for the NIH**

Established by the United States Congress to support the mission of the NIH—improving health through scientific discovery in the search for cures—the Foundation for the NIH is a leader in identifying and addressing complex scientific and health issues. The Foundation is a non-profit, 501(c)(3) charitable organization that raises private-sector funds for a broad portfolio of unique programs that complement and enhance NIH priorities and activities. For additional information about the Foundation for the NIH, please visit [www.fnih.org](http://www.fnih.org).

**About the Biomarkers Consortium**

The Biomarkers Consortium is a public-private biomedical research partnership managed by the [Foundation for the National Institutes of Health](#) that endeavors to discover, develop, and seek regulatory approval for biological markers (biomarkers) to speed the development of medicines and therapies for detection, prevention, diagnosis and treatment of disease and improve patient care. For additional information about the Biomarkers Consortium, please visit [www.biomarkersconsortium.org](http://www.biomarkersconsortium.org).