

A Novel Index of Assessing Atherosclerosis Regression and Plaque Stabilization

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BACKGROUND

Oxidized phospholipids (OxPL) are present in vessel walls and have been shown to be pro-inflammatory and pro-atherogenic. When cholesterol is lowered by drugs or diet, the plasma levels of the OxPL increase, suggesting a movement or clearance of the phospholipids from the vessel wall into the circulation. This activity, then, is an important indicator that plaque stabilization and/or reduction is occurring. Currently, there are no plasma biomarkers that reflect the amount of plaque or determine the benefits of anti-atherosclerotic therapies.

TECHNOLOGY DESCRIPTION

UC San Diego researchers have invented a novel index of atherosclerosis regression that is determined by measuring the plasma content of oxidized phospholipids. The index could provide valuable information to physicians who would use this index to measure the efficacy of treatment with statins or new anti-atherogenic drugs.

RELATED MATERIALS

See the published article [INNOVATION: From lab to product: a blood test's story](#).
Fraleay AE, Schwartz GG, Olsson AG, Kinlay S, Szarek M, Rifai N, Libby P, Ganz P, Witztum JL, Tsimikas S; MIRACL Study Investigators. Relationship of oxidized phospholipids and biomarkers of oxidized low-density lipoprotein with cardiovascular risk factors, inflammatory biomarkers, and effect of statin therapy in patients with acute coronary syndromes: Results from the MIRACL (Myocardial Ischemia Reduction with Aggressive Cholesterol Lowering) trial. *J Am Coll Cardiol*. 2009 Jun 9;53(23):2186-96.

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	9,075,050	07/07/2015	2005-037
United States Of America	Issued Patent	8,129,123	03/06/2012	2005-037

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OTHER INFORMATION

CATEGORIZED AS

- ▶ **Medical**
- ▶ Diagnostics
- ▶ Disease: Cardiovascular and Circulatory System

RELATED CASES

2005-037-0, 2009-236-1, 2009-236-2