



Compounds to Treat Hyperlipidemia and Fatty Liver Disease

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing a novel set of drug-like compounds shown to be potent and selective inhibitors of the protein L-FABP.

Overview

Hyperlipidemia is a condition strongly associated with obesity and is an independent risk factor for the development of coronary heart disease. To help combat hyperlipidemia, the pharmaceutical industry has focused on a protein, MTP, known to play a role in cardiovascular disease. Certain MTP inhibitors have been developed to lower levels of 'bad' cholesterol and triglycerides, and decrease heart disease.

Unfortunately, while MTP inhibitors have been shown to be effective, their use can lead to the development of fatty liver disease, or hepatosteatosis. Highly desirable would be a new drug that could prevent this serious side effect.

The Invention

UW-Madison researchers and collaborators have developed compounds that can be used to prevent fatty liver disease resulting from MTP inhibitors. The compounds selectively inhibit the liver-specific isoform of fatty acid binding protein (L-FABP). Suppression of L-FABP activity has been shown to block the fatty liver side effect caused by MTP inhibitors without diminishing the latter's lipid-lowering benefits.

Applications

- Small molecule L-FABP inhibitors can be used in conjunction with MTP inhibitors to treat hyperlipidemia and fatty liver disease
- Potential new weapon against obesity and possibly heart disease

Key Benefits

- New compounds are potent and selective.
- No comparable drugs currently on the market

Stage of Development

The researchers have demonstrated that dual inhibition of L-FABP and MTP with small molecules is a viable treatment strategy for ameliorating hyperlipidemia without causing fatty liver disease.

The development of this technology was supported by WARF Accelerator. WARF Accelerator selects WARF's most commercially promising technologies and provides expert assistance and funding to enable achievement of commercially significant milestones.

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