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ORAL PRODRUG OF ASTAXANTHIN, CDX-085, ACHIEVES SIGNIFICANT REDUCTION OF TRIGLYCERIDES, ATHEROSCLEROSIS, AND CHOLESTEROL LEVELS IN ANIMAL PROOF-OF-CONCEPT STUDIES

May 2, 2011 – Chicago, IL: Cardax Pharmaceuticals, Inc., a privately held pharmaceutical company headquartered in Honolulu, Hawaii, announced positive results presented at the Arteriosclerosis, Thrombosis and Vascular Biology 2011 Scientific Sessions from two animal proof-of-concept studies designed to assess the effectiveness of its lead proprietary prodrug of astaxanthin, CDX-085, in cardiovascular-related disease pathology. In LDLr^{-/-} mice, the novel anti-inflammatory drug CDX-085 significantly reduced both aortic arch atherosclerosis and total cholesterol levels in a dose-dependent manner. Additionally, in a study employing apoE^{-/-} mice, a significant and dose-dependent, 50-72% reduction in circulating triglyceride levels was observed in groups treated with increasing doses of CDX-085.

Oxidative stress and inflammation are key promoters of atherosclerosis and myocardial damage. The astaxanthin prodrug CDX-085 is a novel and highly bioavailable carotenoid antioxidant that has been observed to protect LDL particles against oxidation and to reduce arterial thrombosis. Related proprietary Cardax prodrugs have also been shown to decrease recurrent thrombosis and reperfusion injury in experimental models of thrombosis and myocardial infarction.

“It should be no surprise that the active drug astaxanthin, which has been observed to have a significant impact on TNF- α and the NF- κ B pathway, should affect both quantitative and qualitative aspects of inflammation-associated lipid dysfunction,” notes lead investigator, Sotirios Tsimikas, MD from the University of California San Diego. “We are encouraged that these animal proof-of-concept data demonstrate that CDX-085 may be a promising oral therapy for the treatment of hypertriglyceridemia and other dyslipidemic disorders,” said Fredric Pashkow, MD, Executive Vice President and Chief Medical Officer, Cardax Pharmaceuticals.

This series of experiments represents a portion of the extensive animal proof-of-concept studies performed using the CDX-085 drug candidate, and the biological data are consistent with recently reported results from randomized clinical trials conducted in Japan using the active drug of CDX-085, astaxanthin.

Presentation Title: The Effect of an Oral Astaxanthin Prodrug (CDX-085) on Lipoprotein Levels and Progression of Atherosclerosis In LDLR^{-/-} and ApoE^{-/-} Mice

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