Media Contact:
Laura Schlageter, MSLGROUP
312-861-5264
laura.schlageter@mslgroup.com

Research Study Published: Corn Oil Helps Lower Cholesterol More Than Extra Virgin Olive Oil

OAK BROOK TERRACE, Ill. – A study published in the January/February 2015 issue of the *Journal of Clinical Lipidology* indicates corn oil significantly reduces cholesterol more than extra virgin olive oil with favorable changes in both total and low-density lipoprotein (LDL) cholesterol.

"The study results suggest corn oil has significantly greater effects on blood cholesterol levels than extra virgin olive oil, due, in part, to the natural cholesterol-blocking ability of plant sterols," said lead researcher Dr. Kevin C Maki, PhD, of Biofortis, the clinical research arm of Merieux NutriSciences. "These findings add to those from prior research supporting corn oil's positive heart health benefits, and align with recommendations to replace saturated fats with unsaturated fats, such as those found in corn oil."

Cardiovascular disease remains the number one cause of death in the United States[1]. Existing research supports the notion that diets containing at least 5-10 percent of calories from polyunsaturated fatty acids (PUFAs) from vegetable oils, are associated with lower risk for heart disease.[2] Additionally, corn oil has a unique combination of healthy fatty acids and plant sterols, which research suggests help lower cholesterol.[3] Corn oil has four times more plant sterols than olive oil and 40 percent more than canola oil.[4] Based on 2013 USDA analysis of corn oil and comparison of other cooking oils, corn oil has a plant sterols content of 135.6 mg/serving vs. 30.0 mg/serving for olive oil.[5] Plant sterols are plant-based substances naturally present in fruits, vegetables, nuts, seeds, cereals, legumes and vegetable oils, such as corn oil. To the extent that plant sterols play a part in reducing blood cholesterol levels, they could have an important role in a heart healthy diet.

Among the 54 healthy men and women in the feeding study, consumption of foods made with corn oil resulted in significantly lower levels of LDL (bad) cholesterol and total cholesterol than the same foods made with extra virgin olive oil. Corn oil lowered LDL cholesterol by 10.9 percent compared to extra

---

[1] Go AS, Mozaffarian D, Roger VL, Benjamin EJ, Berry JD, Borden WB, Bravata DM, Dai S, Ford ES, Fox CS, Franco S, Fullerton HJ, Gillespie C, Hailpern SM, Heit JA, Howard VJ, Huffman MD, Kissela BM, Kittner SJ, Lackland DT, Lichtman JH, Lisabeth LD, Magid D, Marcus GM, Marelli A, Matchar DB, McGuire DK, Mohler ER, Moy CS, Mussolino ME, Nichol G, Paynter NP, Schreiner PJ, Sorlie PD, Stein J, Turan TN, Virani SS, Wong ND, Woo D, Turner MB; on behalf of the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics—2013 update: a report from the American Heart Association. Circulation. 2013; 127:e6-e245.

[2] Howell TJ, MacDougall DE, Jones PJH. Phytosterols partially explain differences in cholesterol metabolism caused by corn or olive oil feeding. J Lipid Res. 1998 Apr; 39(4):892-900.

[3] Wagner K-H, Tomasch R, Elmadfa I. Impact of diets containing corn oil or olive/sunflower oil mixture on the human plasma and lipoprotein lipid metabolism. Eur J Nutr. 2001 Aug; 40(4):161-7.

[4] Harris W, Mozaffarian D, Rimm E, Kris-Etherton P. Rudel LL, Appel LJ, Engler MM, Engler MB , Sacks F. Omega-6 fatty acids and risk for cardiovascular disease: a science advisory from the American Heart Association Nutrition Subcommittee of the Council on Nutrition, Physical Activity, and Metabolism; Council on Cardiovascular Nursing; and Council on Epidemiology and Prevention. Circulation. 2009; 119:902-907.

[5] Based on analysis of corn oil and 2013 USDA comparison of other cooking oils: Corn Oil has plant sterols content of 135.6 mg/serving vs. 30.0 mg/serving for Olive Oil, 40.8 mg/serving for Vegetable Oil, and 93.9 mg/serving for Canola Oil.

virgin olive oil's 3.5 percent reduction, and total cholesterol decreased by 8.2 percent with corn oil compared to 1.8 percent for extra virgin olive oil. [6,7] Study participants received four tablespoons of corn oil or extra virgin olive oil in the foods provided every day, consistent with the recommended Dietary Guidelines for Americans. All foods were provided to the study participants as part of a weight maintenance diet.

The randomized, double-blind, controlled crossover clinical trial, funded in part by ACH Food Companies, Inc., assessed the effects of dietary oils on fasting lipoprotein lipids. The study compared the effects of corn and extra virgin olive oil on LDL cholesterol (primary outcome variable), total cholesterol, HDL cholesterol (good cholesterol), Non-HDL cholesterol, Triglycerides and the total to HDL cholesterol ratio. Study participants had fasting LDL cholesterol ≥130 mg/dL and <200 mg/dL. Fasting blood samples, along with other clinical measurements, were taken from all participants during visits to the clinical study center before and after each treatment phase of the study.

About ACH Food Companies, Inc.

ACH Food Companies, Inc. manufactures, markets and sells a premier branded portfolio of cooking oils, spices and seasonings and baking ingredients in the consumer and foodservice channels in the US, Canada, Puerto Rico and Mexico, all of which are either #1 or #2 brands in their categories. When it comes to baking, ACH features such trusted and loved brands as Fleischmann's® yeast (www.breadworld.com), Fleischmann's® Simply Homemade® bread mixes (www.simplyhomemadebread.com), Argo® corn starch (www.argostarch.com) and baking powder, and Karo® corn syrup (www.karosyrup.com). As one of the largest branded consumer oil manufacturers and marketers in North America, the cornerstone of ACH's portfolio features Mazola® oils (www.mazola.com), the leading corn oil brand in the USA and Canada, and Capullo® oil (www.alimentoscapullo.com), the leading premium canola oil brand in Mexico. ACH is the second largest manufacturer and marketer of spices and seasonings in North America, including Spice Islands® spices and extracts (www.spiceislands.com), Durkee®spices, dry sauces and gravies (http://www.durkee.com), Weber® Seasonings and Sauces (www.weberseasonings.com), Tone's® spices (www.tones.com), French's® dry sauces (www.spiceadvice.com/brands/frenchs), Mazola© brand bouillons, and Patak's® Indian Foods — the leading brand of Indian sauces, pastes and shelf-stable meals in North America.

About Biofortis

Biofortis, a Merieux NutriSciences company, is a leading global clinical nutrition research team serving industry leading clients from the food, ingredient and dietary supplement industry segments.

---

[6] Maki KC, Lawless AL, Kelley KM, Kaden VN, Dicklin MR. Benefits of corn oil compared to extra-virgin olive oil consumption on the plasma lipid profile in men and women with elevated cholesterol: results from a controlled feeding trial. Poster session presented at: American Society for Nutrition's Advances & Controversies in Clinical Nutrition Conference; 2013 Dec 5-7; Washington, D.C.

[7] Baseline mean (standard error) lipid values in mg/dL were: LDL-C 153.3 (3.5), total-C 225.7 (3.9), non-high-density lipoprotein (HDL)-C 178.3 (3.7), HDL-C 47.4 (1.7), total-C/HDL-C 5.0 (0.2), and triglycerides 124.8 (7.2).