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Contact: Rebecca Hall
Marketing Project Manager
Desk: 559.475.0435
RHall@AmericanPistachios.org

STUDY CONFIRMS RELEASE OF KEY ANTIOXIDANTS IN PISTACHIOS

Research Continues to Connect Health Benefits to Pistachio Consumption

FRESNO, Calif., April 25, 2012--- Results of new research presented at the American Society of Nutrition in San Diego contributes to the increasing amount of scientific evidence that underscores the health benefits of eating pistachios on a daily basis.

A study conducted at the Institute of Food Research (IFR) in the United Kingdom in conjunction with the University of Messina, Italy, confirms that key nutrients in pistachios are released during digestion and thus able to be absorbed in the gastrointestinal tract.

Polyphenols, carotenoids (vitamin A) and tocopherols (vitamin E), all with strong antioxidant qualities were quantified in the study.

Giuseppina Mandalari, Ph.D., research scientist at IFR and lead investigator says, “These results are significant as they are the first that show when the bioactive compounds in pistachios are released during digestion and are available to be taken up by the body.” She continues, “This research indicates these nutrients would contribute to the beneficial relationship between pistachio consumption and health-related outcomes, such as heart disease.”

“In addition, these results support the findings of the 2010 nationally-published study¹ and trials by researchers at Penn State University that addressed the positive effect of antioxidants from pistachios on LDL cholesterol,” added Constance J. Geiger, Ph.D., R.D. who serves as a nutrition research consultant with the American Pistachio Growers.

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This new data helps connect the dots between the bioactive compounds in pistachios, their release into the digestive tract and absorption into the blood. The Penn State study showed an increase in lutein and gamma-tocopherol in the blood was related to a decrease in oxidized LDL (bad) cholesterol, when pistachios were eaten daily, thereby contributing to a reduced risk of heart disease.

In the present study, researchers tested raw, roasted and salted pistachios and muffins made with raw pistachios in an in vitro model of digestion which simulates the human stomach and small intestine. The bioaccessibility of the nutrients in pistachios was evaluated at various stages during the digestion process. Each measurement was performed in triplicate for the three tested models.

No significant differences in bioaccessibility of the bioactive compounds were noted between raw and roasted salted pistachios in the stomach and small intestine. Only the presence of baked muffin limited the release of protocatechuic acid and luteolin in the gastric and duodenal compartments.

About the Study

The study began in 2010 and was completed in 2011. While a number of studies have demonstrated the positive effects of pistachio consumption in modifying lipid risk factors for coronary heart disease, this study is the first to characterize pistachio polyphenols, carotenoids and tocopherols and investigate their bioaccessibility during digestion.

A dynamic gastric model of digestion which provides a realistic and predictive simulation of the physical and chemical processing and accurately mimics both the transit time and the luminal environment within the human stomach was used for the digestion studies.

This work was funded by the American Pistachio Growers.

Pistachio Facts

Pistachios are a naturally cholesterol-free snack that contains just 1.5 grams of saturated fat and 13 grams of fat per serving, the majority of which comes from monounsaturated and polyunsaturated fat. A one-ounce serving of pistachios equals 49 nuts, which is more nuts per serving than any other snack nut. One serving has as much potassium (300 mg, 8 percent) as an orange (250 mg, 7 percent), making it a nutritious snack choice or ingredient to incorporate into daily diets.

About American Pistachio Growers

American Pistachio Growers is a voluntary trade association representing members who are pistachio growers, processors and industry partners in California, Arizona and New Mexico. These states represent 100% of the domestic commercial pistachio production. APG pistachios are the “Official Snack” of both USA Water Polo and Miss California. All share the goal of increasing national awareness about the nutritional benefits of pistachios. For more information, visit <http://www.AmericanPistachios.org>.

¹Kay CD, Gebauer SK, West SG, Kris-Etherton PM. Pistachios increase serum antioxidants and lower serum oxidized-LDL in hypercholesterolemic adults. J Nut. 2010;140:1093-98.

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