



Contact: Lucy Keith
Fleishman-Hillard
(512) 495-7174
lucy.keith@fleishman.com

Initial Research: Mango's Effects on Ulcerative Colitis & Bone Parameters in Animal Models
Three New Mango Studies Presented at 2014 Experimental Biology Conference

Orlando, Fla (May 13, 2014) – Three new mango-related studies were presented this week at the 2014 Federation of American Societies for Experimental Biology (FASEB) in San Diego, revealing initial findings on the effects of mango consumption on ulcerative colitis and bone parameters in animal models.

“The mango industry’s nutrition research program is committed to advancing our understanding of the role mangos can play as part of a healthy diet,” said Megan McKenna, Director of Marketing for the National Mango Board. “These studies provide important insights that will drive future research.”

Initial research from the Texas A&M University lab led by Susanne Mertens-Talcott, Ph.D., Assistant Professor and Director of Research, Institute for Obesity Research and Program Evaluation of Texas A&M University, investigated the effects of mango and pomegranate polyphenolics on fecal microbiota and short chain fatty acid (SCFA) production in ratsⁱ. Rats were administered control, mango, or pomegranate juice, and were exposed to three cycles of 3% DSS followed by a two-week recovery period. The results found that mango juice induced changes in SCFAs production while pomegranate juice induced changes in the composition of microbiota. To view the full abstract, visit: http://www.fasebj.org/content/28/1_Supplement/1045.6.abstract?sid=881bd512-b205-4627-b64a-c02e7001d351

Additional preliminary research from Dr. Mertens-Talcott explored the anti-inflammatory effects and possible mechanisms of mango and pomegranate juice in DSS-induced colitis in rats.ⁱⁱ The study results suggest that polyphenolics of different predominant structure may differentially regulate inflammation-involved pathways while attenuating DSS-induced colitis. To view the full abstract, visit: http://www.fasebj.org/content/28/1_Supplement/372.8.abstract?sid=88332839-b342-41e9-9dc7-f7b5614e41a7

Initial research from Edralin Lucas, Ph.D., associate professor of nutritional sciences in the College of Human of Sciences at Oklahoma State University, examined the effects of mango and its polyphenol in preventing bone loss in ovariectomized mice, a model of postmenopausal osteoporosis.ⁱⁱⁱ The findings suggest that mango supplementation may promote the maintenance of skeletal health in estrogen deficiency through its effects on trabecular bone. To view the full abstract, visit: http://www.fasebj.org/content/28/1_Supplement/1025.9.abstract?sid=16e399c4-2e4b-4a98-ac8c-918b5a66117b

A nutrient rich fruit, mangos contain over 20 different vitamins and minerals, supporting optimal function of processes throughout the body. Mangos are an excellent source of the antioxidant vitamins C and A as well as folate. They are also a good source of fiber, copper, and vitamin B6.

About National Mango Board

The National Mango Board is an agriculture promotion group, which is supported by assessments from both domestic and imported mangos. The board was designed to drive awareness and consumption of fresh mangos in the U.S. The superfruit mango contains 100 calories, an excellent source of vitamins A and C, a good source of fiber and an amazing source of tropical flavor.



Mango availability per capita has increased 53 percent since 2005 to an estimated 2.87 pounds per year in 2013. Mango import volume for 2013 was 935 million pounds. Learn more at www.mango.org.

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ⁱ Kim, H., Minamota, Y., Markel, M., Suchodolski, J., Talcott, S., Mertens-Talcott, S. (2014) Mango and pomegranate polyphenolics in the modification of microbiota and short chain fatty acids in DSS-induced colitis (1045.6). *The FASEB Journal*, 28(1 Supplement).

ⁱⁱ Kim, H., Banerjee, N., Ivanov, I., Talcott, S., Mertens-Talcott, S. (2014) Comparison of anti-inflammatory mechanisms of mango (*Mangifera indica* L.) and pomegranate (*Punica granatum* L.) in DSS-induced colitis in rats (372.8). *The FASEB Journal*, 28(1 Supplement).

ⁱⁱⁱ Eldoumi, H., Meister, M., Peterson, S., Ketz-Riley, C., Perkins-Veazie, P., Stephen, C., Smith, B., Lucas, E. (2014) The effects of freeze-dried mango on bone parameters in ovariectomized mice (1025.9). *The FASEB Journal*, 28 (1 Supplement).