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Extracting Muscadine's Medicinal Properties

by Sheila Roberson

The University of Georgia's Nutraceutical Research Laboratory recently received a Georgia Center of Innovation award from Governor Sonny Perdue for its work on the nutraceutical value of the muscadine grape. The accompanying grant, funded by the OneGeorgia Authority, will support development of the commercial production process for a concentrated liquid extract from muscadine grape pomace.

The research team, composed of Diane Hartle and Phillip Greenspan, associate professors in the College of Pharmacy, and James Hargrove, associate professor in the College of Family and Consumer Sciences, is working closely with the muscadine industry to turn formerly wasted pomace from the juicing process into a high value-added commercial product.

"We targeted the waste pomace for nutraceutical development because 95 percent of the medicinal value of the muscadine is in this fraction," said Hartle.

The laboratory has been conducting biomedical research on muscadine photochemical fractions for the past six years. The muscadine is being developed for its anti-oxidant and anti-inflammatory properties and its action against cancer, aging, osteoarthritis and diabetes. *Muscadine Medicine*, a book written by Hartle, Greenspan and Hargrove in 2005, summarizes the biomedical literature supporting the health benefits of muscadines.

The laboratory's industry partner is Muscadine Products Corporation in Irwin County. The grant will provide matching funds from industry to assist in the testing and development of processing the pomace into a spray-dried fraction that will be ready for use in nutraceutical products.

"Our team is grateful to the state of Georgia for encouraging rural entrepreneurial development," said Hartle. "The location of Muscadine Products Corporation's processing plant in south Georgia keeps all the jobs associated with processing, shipping and marketing in a region of the state that needs economic development."