



The KALAMAZOO Section  
presents

Professor Joe Vinson



## The Chemistry and Biochemistry of Chocolate: A Guilt Free Food?

With guest – Dale Anderson, chocolatier  
and founder of Confections with Convictions,  
Kalamazoo, MI



7:00 pm, Wednesday, September 28, 2011

Student Commons Theater

Kalamazoo Valley Community College – Texas Township Campus

Food and beverages derived from cocoa beans have been consumed by humans for 1500 years, and the beverage was originally used as currency and in religious rites by the Mayans and Aztecs. A short history of chocolate will give some perspective to the science of chocolate. Cocoa pods from the cacao tree *Theobroma cacao* are harvested and the beans removed from the pods and fermented. Dried and roasted beans contain about 300 chemicals including unique fats, alkaloids, and simple and complex polyphenols. The manufacturing process results in the production of the various types of chocolate including white chocolate, milk chocolate, dark chocolate, and cocoa powder. Chocolate is purported to have aphrodisiac properties and one ingredient acts on the cannabinoid (marijuana) receptor. Chocolate's antioxidant properties will be outlined and compared with other foods. How chocolate's fat and antioxidants are related to heart disease will be discussed in terms of epidemiological, animal, human supplementation, and mechanistic studies. Recent animal and human studies will be described to determine whether chocolate should be considered a guilt-free food.

After Professor Vinson's presentation, audience members will learn about the craft of making truffles from local chocolatier Dale Anderson and **taste some of the creations from Confections with Convictions.**

Advance registration is required. ACS members and students are free. Guests are \$2 each (collected at the door). Send names to [dwilliams@kalsec.com](mailto:dwilliams@kalsec.com) or call Doug Williams at 349-9711 (x3298) by Wednesday, September 14 to reserve your place.

Dr. Joe Vinson received his B.S. in chemistry from the University of California at Berkeley and his M.S. and Ph.D. in organic and analytical chemistry from Iowa State University. He is currently a professor of chemistry at the University of Scranton in northeastern Pennsylvania. His research has been featured in Prevention, Psychology Today, Consumer Reports, AARP, Tufts Health & Nutrition Newsletter, U.S. News & World Report and lampooned in a cartoon in Time magazine. He has appeared on TV-Good Morning America Sunday and radio-NPR All Things Considered and The Peoples' Pharmacy, as well as being mentioned by Jay Leno and Rush Limbaugh. Dr. Vinson is the author of over 70 publications. His research interests are wide-ranging and include drug analysis in physiological fluids and the effect of vitamins, minerals, and antioxidants on nutrition and health.

Dale Anderson, a youth counselor and licensed residential builder, spent three years studying and practicing chocolate making, and rehabilitated the building that serves as his shop. Confections with Convictions is a self-funded project that employs young people from the Juvenile Court system and provides employment and life skills training through the creation of chocolates. His fair trade, organic chocolates and the mission of his shop are described in more detail at <http://www.confectionswithconvictions.com/>.