## **Benefits of Cocoa Polyphenols**

Cocoa is a rich source of flavonoids, which appear to have potent antioxidant activity. The cocoa and chocolate industry has the opportunity to market these benefits to health-conscious consumers.

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Emerging research continues to provide further support that diets that include plantbased products can reduce and/or delay the onset of various chronic diseases (e.g., cardiovascular disease and cancer). Flavonoids are polyphenolic compounds of plant origin; the predominant flavonoids in cocoa are flavanols. Research published to date demonstrates that the cocoa bean is a rich source of flavanols; cocoa is now mentioned in the context of other rich sources of these compounds (i.e., tea, grapes and grapefruit). As cocoa-containing polyphenols (epicatechin, catechin and oligomers of these molecules in the form of procyanidins) continue to be a research area of interest, the cocoa and chocolate industry will have varied opportunities to promote cocoa consumption as an ingredient and in finished products. Additionally, research results suggesting new uses for cocoa and chocolate (e.g., theobromine as a cough suppressant) will also be discussed.

Epidemiological research continues to provide strong support that regular fruit and vegetable consumption can lessen and/or delay development of certain chronic diseases, including cancer, heart disease, hypertension, diabetes and stroke. Additionally, the identification of foods with potential health benefit(s) has emerged as an area of active research and a public health objective. Cocoa has been determined to be a rich source of flavonoids; chocolate products containing proportional amounts of cocoa solids can contain a high amount of cocoa polyphenols per serving, compared to other foods recognized as rich sources of these compounds.

## AN ANCIENT FOOD ENJOYS A RESEARCH RENAISSANCE

Ever since the seminal 1996 publication linking chocolate with other antioxidantrich food sources such as red wine and green tea, there has been a growing body of research that implicates compounds found in cocoa and chocolate as having potential health benefits. Surprisingly, a great deal has happened within a relatively short period of time, considering that a decade in scientific research typically does not produce substantial results.

Length of time notwithstanding, studies analyzing cocoa and chocolate have crossed from the stage of identifying useful chemicals to applying them to specific ailments, including breast cancer, cardiovascular disease disorders, chronic coughing, diabetes and, most recently, diarrhea.

It should not be surprising that research studies are time and again implicating cocoa >



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