

Beyond Caffeine. Unexplored Potentiality of other Coffee Compounds

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Many studies have shown positive effects of moderate regular coffee-drinking habit on various aspects of health, ranging from psychoactive responses to neurological and metabolic disorders. Among approximately 850 volatile and 700 non-volatile substances, caffeine is the coffee compound which plays the most relevant role in the health's impact of coffee consumption, and up to few years ago, it has been considered the only one biologically active coffee compound. For this reason, very little attention has been paid to investigate coffee compounds other than caffeine. However, coffee brews are characterized by properties, such as antioxidant and antibacterial activities, which cannot be exclusively related to the presence of caffeine. Moreover, several recent studies put in evidence that coffee beverage is rich of many other biologically active substances, some of them naturally occurring (polysaccharides, polyphenolics, sterols, tocopherols, etc.), some others generated by roasting (quinides, melanoidins, nicotinic acid, nicotinamide, etc.). The scope of the present work is to provide an overview of several coffee non-volatile compounds, other than caffeine, with potential benefits or adverse aspects on human health. Coffee compounds presence and concentration in the beverage is determined by many factors such as coffee botanical species and varieties, raw material processing, blending, roasting process and brewing method. Up to now, these factors have been exploited to offer coffee products able to satisfy consumer taste, flavour and mouthfeel needs, in the future, however, they could be used to modulate physiological effects and then to personalize the coffee health impact..