

DSM Science & Technology Awards (SOUTH) 2008	
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Epidemiological studies have indicated that moderate consumption of beverages rich in polyphenols such as red wine is associated with a reduced risk of cardiovascular diseases and cancer. Interestingly, the development of both types of diseases is critically dependent on the formation of new blood vessels, which provide oxygen and nutrients to surrounding cells thereby promoting their progression.

Therefore, our major goal is to evaluate the potential of red wine polyphenols (RWPs) to prevent the development of atherosclerosis, obesity and tumors, and to characterize the underlying molecular and cellular mechanisms. Our findings indicate that RWPs are potent inhibitors of several pro-angiogenic responses in vascular cells and also of the *in vivo* formation of new blood vessels in experimental models of angiogenesis (ischemia, tumors). Our investigations also led to the identification of several original polyphenols in the red wine extract with biological activity, which are currently evaluated for the prevention/treatment of diseases.