



News Release

Study shows photoprotective effect of chocolate that is rich in flavanols: Barry Callebaut's ACTICOA™ chocolate helps to protect the skin from UV light

- **Eating chocolate rich in flavanols can significantly help to protect the skin from UV light**
- **90% of all visible skin ageing is directly related to sun exposure**
- **ACTICOA™ chocolate from Barry Callebaut contains a guaranteed minimum level of cocoa flavanols**

Wieze, Belgium, 17 September 2009 – An independent study conducted by the London University of the Arts has revealed that eating chocolate rich in flavanols can significantly help to protect the skin from the harmful effects of ultraviolet radiation.¹ The study demonstrated that regular consumption of specially produced chocolate with preserved high cocoa flavanol levels can more than halve the sensitivity of the skin to UV light. These striking results are unprecedented and pave the way for new possibilities in nutritional protection against damage caused by the sun. It is estimated that 90% of all visible skin ageing is directly related to sun exposure.²

The double-blind, randomized, *in vivo* study involved the daily consumption of 20g doses of chocolate by two random groups of each 15 healthy adult males and females. One group was given Barry Callebaut ACTICOA™ dark chocolate, the other was given the same dose of chocolate made according to the same recipe but using conventional production methods. In the ACTICOA™ group, the mean minimum erythema dose – or minimum dose of UV to cause reddening of the skin – more than doubled while no significant increase was observed in the conventional chocolate group. The authors of the study state that the photoprotective effect of ACTICOA™ is most likely to be caused by the anti-inflammatory and antioxidant activity of the cocoa flavanols found in vastly greater concentrations in ACTICOA™ chocolate.

“Chronic UV exposure is the main cause of premature skin aging and also plays an important role in cutaneous carcinogenesis. Our study demonstrated, for the first time to our knowledge, that regular consumption of chocolate rich in flavanols confers substantial photoprotection and can thus be effective at protecting human skin from harmful UV effects. Conventional chocolate had no such effect.” – Dr. Stefanie Williams, Dermatologist, Cosmetic Science Group, London University of the Arts and private Dermatology Clinic “European Dermatology London”.³

¹ Williams, S., Tamburic S. and Lally, C. "Eating chocolate can significantly protect the skin from UV light." *Journal of Cosmetic Dermatology* 8: 169-173 (2009).

² Gallagher, R.P. "Sunscreens in melanoma and skin cancer prevention" *CMAJ* 173, 244–245 (2005).

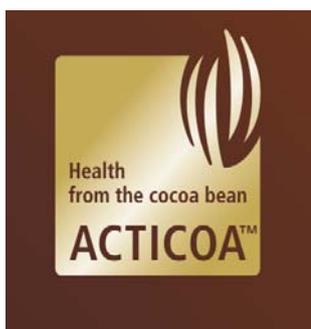
³ Williams, S., Tamburic S. and Lally, C. "Eating chocolate can significantly protect the skin from UV light", *Journal of Cosmetic Dermatology*, 8, 169–173 (2009).



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While eating chocolate in no way replaces the need for sun screen or other forms of protection, this recent independent study shows that eating Barry Callebaut's ACTICOA™ chocolate, rich in natural cocoa flavanols can play an important role in helping to maintain a healthy skin.

Previous studies have linked the regular consumption of cocoa flavanols to a whole host of beneficial effects from maintaining cardiovascular health to improved brain function or anti-ageing in general. However, this latest study is the first to demonstrate a link between chocolate and natural protection from UV radiation.



“Numerous media reports have created the false impression that all dark chocolate products confer the same health-enhancing benefits even though many contain low amounts of flavanols,” said Barry Callebaut's Chief Innovation Officer Hans Vriens. *“Fact is that the flavanols found in fresh cocoa beans are partially destroyed in the production of conventional chocolate. Barry Callebaut's ACTICOA™ process guarantees a minimum concentration of cocoa flavanols in the finished product. ACTICOA™ cocoa and chocolate therefore offer the very best in natural protection, helping to restore the balance between antioxidants and free radicals in the body. At present, around 30 products containing ACTICOA™ cocoa or chocolate are sold in more than 10 countries around the world.”*

www.acticoa.com

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Barry Callebaut (www.barry-callebaut.com):

With annual sales of more than CHF 4.8 billion for fiscal year 2007/08, Zurich-based Barry Callebaut is the world's leading manufacturer of high-quality cocoa and chocolate products – from the cocoa bean to the finished product on the store shelf. Barry Callebaut is present in 26 countries, operates about 40 production facilities and employs around 7,000 people. The company serves the entire food industry, from food manufacturers to professional users of chocolate (such as chocolatiers, pastry chefs or bakers), to global retailers. It also provides a comprehensive range of services in the fields of product development, processing, training and marketing.

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