News Release

ACTICOA® chocolate significantly improves skin elasticity

- Recent study provides evidence of the ACTICOA® chocolate's anti-aging properties.
- Just two 10g serves of ACTICOA® dark chocolate per day is enough to achieve positive improvements in skin elasticity.

Wieze, Belgium, 17 November 2009 – Barry Callebaut, the world's leading manufacturer of high-quality cocoa and chocolate products, announces the results of a recent clinical trial into the anti-aging properties of ACTICOA® cocoa and chocolate. The study, conducted by SIT research centre in Germany, demonstrates that consuming 300mg of cocoa flavanols twice a day significantly increases the elasticity of the skin.

Hans Vriens, Chief Innovation Officer at Barry Callebaut says: "The impressive results of this study add further weight to the anti-aging properties of ACTICOA® cocoa and chocolate, one of the richest known sources of flavanols. We are now closer to understanding how these flavanols nourish the skin from the inside and protect it against damaging environmental influences such as exposure to the sun".

In this most recent long-term, placebo-controlled, double-blind clinical study, the potential effect of an oral supplement based on cocoa flavanols on skin elasticity was investigated with a non-invasive topical device. 30 participants were allocated to either the cocoa flavanol group or the placebo group over a period of 6 months. Subjects in the cocoa flavanol group were given two cocoa extract supplements per day, each containing 300mg of cocoa flavanols, while the volunteers from the placebo group were given 2 tablets in which the cocoa extract was replaced by microcrystalline cellulose.

The tests revealed a significant and sustained improvement in skin elasticity amongst participants from the cocoa flavanol group of up to 34% after 6 months. Even when adjusted for the natural improvement in elasticity commonly observed between winter and summer months, the net increase in this group was still 12.5% higher than in the placebo group after 6 months. The changes in the dermal skin layer is what causes our skin to lose its elasticity and form wrinkles. The oral intake of cocoa extract, as a natural source of cocoa flavanols, seems to be a promising alternative to existing skin creams aimed at improving elasticity. The consumption of two times 300mg flavanols a day on a continuous basis helps you to maintain a good skin elasticity when consumed as part of a balanced and varied diet and a healthy lifestyle. This positive effect of cocoa flavanols is most likely related to deeper (dermal) changes, which take longer to have a visible effect.



News Release +33.8% vs baseline +12,5 % vs placebo (* 1.6 1,5 °p=0.0351 to baseline +10,3% vs bas ΞB 1,4 +9.5% vs placebp (*) 1:338 1.3 *p=0.0355 1,213 elasticity [Ur/Ue] in relation 1.3 1,103 1.1 1,008 1 0.9 0,8 0.7 skin 0,6 0.5 t0 3 month 6 month

"The results are comparable with those achieved by leading cosmetics products. The difference here, however, is that the effect comes from "within" and is consequently observed over the whole body," Says Dr. Joachim Degwert, President SIT (Skin Investigation und Technology Hamburg GmbH).

Along with decreased hydration of the epidermis, decrease in elasticity is one of the phenomena most commonly associated with aging skin. A less elastic skin is also typically seen in heavy smokers. The improvement of elasticity observed in this recent study is thought to result from the activity of antioxidant flavanols contained in ACTICOA® cocoa and chocolate on the elastic fibers within the dermis or deep skin layer. This recent study is part of mounting evident of the anti-aging properties of ACTICOA® offering beauty from within thanks to the natural goodness of the cocoa bean.



Barry Callebaut's unique ACTICOA® process is the outcome of years of research into ways of preserving cocoa flavanols in chocolate. Scientifically proven to be the most powerful antioxidants in existence with wide-ranging benefits for human health, cocoa flavanols are nonetheless mostly destroyed during the conventional chocolate-making process. ACTICOA® chocolate, however, succeeds in preserving up to 80% of the flavanol content of raw cocoa and is thus the richest known source of antioxidants.

Barry Callebaut (<u>www.barry-callebaut.com</u>)

With annual sales of about CHF 4.9 billion / EUR 3.2 billion for fiscal year 2008/09, 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 7,500 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. Barry Callebaut is the global leader in cocoa and chocolate innovations and provides a comprehensive range of services in the fields of product development, processing, training and marketing. The company is actively engaged in initiatives and projects that contribute to a more sustainable cocoa supply chain.

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^{*:} p-values: two sided ttest for independent samples, P<0.05 is a significant difference

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Contacts for the media:

Nicole Heremans Barry Callebaut Belgium NV +32 53 73 03 32 <u>Nicole_Heremans@barry-callebaut.com</u>

Sally Herygers Pride +32 472 67 97 03 sally.herygers@pr-ide.be Ann Maes Pride +32 477 41 70 92 ann.maes@pr-ide.be