Supercritical Schisandra Extracts – a New Concept for Personal Care Cosmetics

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Abstract

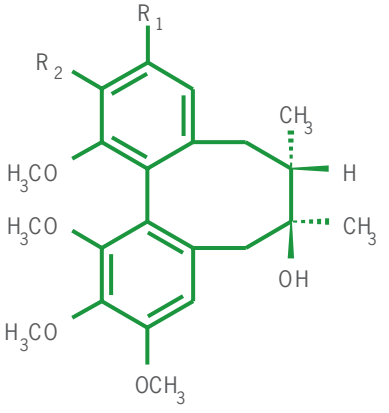
Berry extracts of the *Schisandra sphenanthera* and *Schisandra chinensis* varieties are well known in Far Eastern medicine for their positive effects after internal application. The current article investigates different *Schisandra* extracts for their topical cosmetic application. It has been demonstrated that a *Schisandra* berry extract produced by CO_2-extraction from the *sphenanthera* variety had the best efficacy. The UV-protective and anti-inflammatory properties are based on COX-2 and prostaglandin (PG) inhibition. This *Schisandra* CO_2-extract did not show any cytotoxicity and is therefore safe in application.

Accordingly *Schisandra* is a safe and effective ingredient for the prevention and treatment of hyperproliferative and inflammatory skin conditions and offers a new concept for personal care cosmetics.

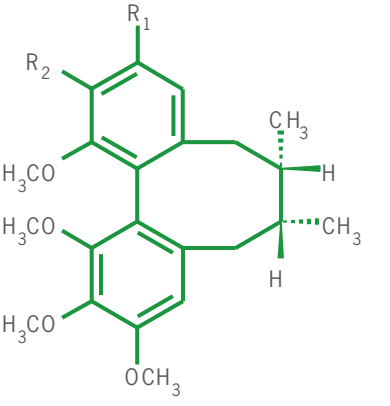
Introduction

Schisandra is a climbing vine growing mainly in Eastern Asia. The female plants produce red fruits. In contrast to other red fruits like sea buckthorn, they hang down in bunches like grapes and the red colour is not due to carotenes but to anthocyanidines which are water soluble flavonoid pigments (Photograph).

There are two main varieties. *Schisandra chinensis,* or bei-wuweizi, is mainly found in the Northern part of China and officinal in the Chinese pharmacopoeia IX and in the Japanese pharmacopoeia XI. *Schisandra sphenanthera*, or nan-wuweizi, originates from the Southern part of China and is officinal in the Chinese pharmacopoeia IX.



Schizandrin $R_1 = O CH_3$, $R_2 = O CH_3$
Gomisin A $R_1 + R_2 = O C H_2 O$



Deoxyschizandrin $R_1 = OCH_3$, $R_2 = OCH_3$
(±)-γ -Schizandrin $R_1 + R_2 = OCH_2O$

Figure 1 – Structure of typical *schisandra* lignans