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## Transport of Lignans from *Schisandra chinensis* Across Caco-2 Cell Monolayer

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Fruits and seeds of *Schisandra chinensis* (Schizandraceae) are used in traditional Chinese medicine. The pharmacological activities, including hepatoprotective, antioxidant, anticancer and anti-HIV have been attributed to the presence of lignans. This study examined the bioavailability of three major lignans (Schisandrin C, Gomisin A and Gomisin N) isolated from *S. chinensis*. The intestinal epithelial membrane transport across caco-2 cell monolayers was determined. Quantitation of lignans was performed by an HPLC method using a Phenomenex Luna C18(2) reversed phase column (150×4.6 mm, 5 μm) with sodium dihydrogen phosphate-acetonitrile gradient at a flow rate of 1.0 mL per minute. Apical to basolateral permeability coefficient and percent transport were determined and compared under identical conditions with atenolol. Permeability coefficients were also compared with the reported values for mannitol, propranolol and glucose. Sodium fluorescein was used as the marker for paracellular leakage. These compounds, in the concentration range of 25~200 μM, demonstrated substantial linear transport across the monolayer in the apical to basolateral direction, with moderate to high efflux rates and permeability coefficients.