



## Effect of amygdalin on proliferation of rat hepatic fat-storing cells and collagen production *in vitro*

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### Abstract

**AIM:** To study the anti-fibrotic mechanism of amygdalin, a component of *Semen Persicae*, on fat-storing cells (FSC).

**METHODS:** Livers of normal adult rats were perfused with Pronase E and collagenase *in situ*. FSC were isolated by centrifugation with 11% Metrizamide. The subcultured FSC were incubated with  $10^{-4}$ - $10^{-8}$  mol/L amygdalin for 72 h, and then FSC proliferation and collagen

production were assayed, respectively.

**RESULTS:** Low doses of amygdalin reduced incorporation of L-[ $^3$ H]-thymidine into FSC and L-[ $^3$ H]-proline into secreted collagenase-sensitive proteins and cell layer-associated collagenase-sensitive proteins. The strongest effects were seen for the  $10^{-8}$  mol/L dose of amygdalin, which inhibited the proliferation of FSC by 25.0%, and decreased collagen production in medium and cell layer by 24.2% and 26.8%, respectively.

**CONCLUSION:** An anti-fibrotic mechanism of amygdalin is to inhibit the proliferation and collagen production of active FSC.

**Key words:** Amygdalin; Pharmacology; Liver; Drug effects; Cirrhosis; Drug therapy; Collagen; Biosynthesis

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