

# アロエベラに含まれるアロエシン誘導体の 抗酸化フリーラジカルスカベンジャーならびに抗炎症作用

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## Antioxidant, Free Radical Scavenging and Anti-Inflammatory Effects of Aloesin Derivatives in *Aloe vera*

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**ABSTRACT** : Antioxidant components in *Aloe vera* were examined for lipid peroxidation using rat liver microsomal and mitochondrial enzymes. Among the aloesin derivatives examined, isorabaichromone showed a potent antioxidative activity. The DPPH radical and superoxide anion scavenging activities were determined. As one of the most potent components, isorabaichromone together with feruloylaloesin and *p*-coumaroylaloesin showed potent DPPH radical and superoxide anion scavenging activities. Electron spin resonance (ESR) using the spin trapping method suggested that the potent superoxide anion scavenging activity of isorabaichromone may have been due to its caffeoyl group. As *A. vera* has long been used to promote wound healing, the inhibitory effects of aloesin derivatives for cyclooxygenase (Cox)-2 and thromboxane (Tx) A<sub>2</sub> synthase were examined and the participation of *p*-coumaroyl and feruloyl ester groups in the aloesin skeleton was demonstrated. These findings may explain, at least in part, the wound healing effects of *A. vera*.

**抄録** アロエベラエキス成分のラット肝ミクロソームとミトコンドリアにおける抗酸化、抗炎症作用について研究した。アロエベラエキス成分のうち、アロエシン関連化合物のDPPHラジカルやスーパーオキシドアニオンに対する抗酸化作用で、イソラバクロモン（アロエシンのコーヒー酸エステル）はアロエシンのフェルラ酸やp-クマル酸エステルとともに抗酸化作用を示し、且つERS測定で強力な補足効果を示した。さらにこれらエステル類はCox-2とTxA<sub>2</sub>酵素の抑制効果を示した。これによりアロエのもつ抗炎症・創傷治癒効果の一つは、アロエシン関連化合物によると証明された。

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