



AMERICAN
BOTANICAL
COUNCIL

Post Office Box 144345
Austin, Texas 78714-4345
Phone 512 926-4900
Fax 512 926-2345
Email: abc@herbalgram.org
www.herbalgram.org

Mark Blumenthal
Editor

Wayne Silverman, PhD
Underwriting Coordinator

Betsy Levy
Densie Webb, PhD
Leela Devi, MSN, RN
Summary Writers

Karen Newton
Database Manager

Susan McFarland
Ginger Webb
Co-coordinators

Dawnelle Malone
Research Assistant

The American Botanical Council provides this summary and the enclosed article as an educational service. By providing this article, ABC does not warrant that the data is accurate and correct, nor does distribution of the enclosed article constitute any endorsement of the information contained or of the views of the authors.

ABC does not authorize the copying or use of the original articles. Reproduction of the summaries is allowed on a limited basis for students, colleagues, employees and/or customers. Other uses and distribution require prior approval.

HERBCLIP

FILE: **Fennel**
(*Foeniculum vulgare*)

DATE: August 26, 1996

HC 8-26-6-2

RE: **Experimental Studies on Fennel Seeds**

Tanira, M.O.M., A.H. Shah, A. Mohsin, A.M. Ageel, and S. Qureshi. 1996. Pharmacological and Toxicological Investigations on *Foeniculum vulgare* Dried Fruit Extract in Experimental Animals. *Phytotherapy Research*, Vol. 10, pp. 33-36.

The ripe fruit of fennel (*Foeniculum vulgare*) is used in folk medicine of the Arabian Peninsula as a diuretic, stimulant, appetizer, digestive, and infantile febrifuge. In order to investigate its pharmacological properties, the ethanol extract of the dried ripe fennel fruit was subjected to a number of tests in laboratory rats.

Diuretic activity was tested by dosing the rats orally with fennel extract. Results showed a highly significant diuretic effect after 5 and 24 hours of administration. Urine output was almost double that of the control rats'. In "hot plate" tests, analgesic activity was statistically significant after 90 and 150 minutes of administration. In another test, antipyretic (fever-reducing) activity was noted at 30 and 90 minutes (but not at 150 minutes). Administration of the extract (500 mg/kg) caused a 33% increase in bile secretion compared to controls. The same amount of extract showed marked mitodepressive activity, a property of cytotoxicity. *In vitro* tests showed the antimicrobial effects of the extract, which prevented the growth of *Staphylococcus aureus* and *Bacillus subtilis*.

Given orally in doses of 0.5, 1, and 3 g/kg, the extract caused no deaths in the rats. The 3 g/kg dose produced side effects, such as reduced locomotor activity and piloerection (erection of hair due to action of arrectores pilorum muscles). No signs of acute toxicity were observed. —*Ginger Webb*