



DRUG METABOLISM AND DISPOSITION

Abstract

Pharmacokinetics of cannabidiol in dogs.

E Samara, M Bialer, and R Mechoulam

Drug Metabolism and Disposition May 1988, 16 (3) 469-472;

Article

Info & Metrics

eLetters

PDF

Abstract

Cannabidiol (CBD) is one of the major nonpsychoactive cannabinoids produced by *Cannabis sativa* L. Recent studies have shown that CBD has a high protective index, comparable to that of phenobarbital and phenytoin. Because CBD has been reported to possess both anticonvulsant and antiepileptic activity, its pharmacokinetics were studied in dogs after the administration of two iv doses (45 and 90 mg) and one oral dose (180 mg) to dogs. After iv administration, CBD was rapidly distributed, followed by a prolonged elimination. It has a terminal half-life of 9 hr. CBD plasma levels declined in a triphasic fashion. The total body clearance of CBD was 17 liters/hr (after the 45-mg dose) and 16 liters/hr (after the 90-mg dose). This clearance value, after its normalization to blood clearance using mathematical equations, approaches the value of the hepatic blood flow; the extraction ratio in the liver is 0.74. CBD was observed to have a large volume of distribution, approximately 100 liters. In the dose range of 45 to 90 mg, the increase in the AUC was proportional to the dose, a fact that indicates that the pharmacokinetic profile of CBD in this dose range was not dose dependent. In three of the six dogs studied, CBD could not be detected in the plasma after oral administration. In the other three, the oral bioavailability ranged from 13 to 19%. The results of this study show that CBD is barely absorbed after oral administration to dogs. This low bioavailability may be due to a first pass effect.

THANK YOU FOR ACCEPTING COOKIES

You can now hide this message or find out more about cookies.

Hide

More info

Log in

Pay Per Article - You may access this article (from the computer you are currently using) for 1 day for US\$35.00

Regain Access - You can regain access to a recent Pay per Article purchase if your access period has not yet expired.

[← Previous](#)

[Next →](#)

[^ Back to top](#)

In this issue

Drug Metabolism and Disposition

Vol. 16, Issue 3
1 May 1988

[Table of Contents](#)
[Index by author](#)

 [Download PDF](#)

 [Article Alerts](#)

 [Email Article](#)

 [Citation Tools](#)

 [Request Permissions](#)

 [Share](#)

 [Tweet](#) 

[Like 1](#)

 

▼ Related Articles

No related articles found.

[Scopus](#) [PubMed](#) [Google Scholar](#)

▶ Cited By...

▶ Similar Articles

[Home](#)

[Alerts](#)

THANK YOU FOR ACCEPTING COOKIES

You can now hide this message or find out more about cookies.

Hide

More info

[Fast Forward by date](#)

[Fast Forward by section](#)

[Latest Articles](#)

[Archive](#)

[Search for Articles](#)

[Feedback](#)

[ASPET](#)

More Information

[About DMD](#)

[Editorial Board](#)

[Instructions to Authors](#)

[Submit a Manuscript](#)

[Customized Alerts](#)

[RSS Feeds](#)

[Subscriptions](#)

[Permissions](#)

[Terms & Conditions of Use](#)

ASPET's Other Journals

[Journal of Pharmacology and Experimental Therapeutics](#)

[Molecular Pharmacology](#)

[Pharmacological Reviews](#)

[Pharmacology Research & Perspectives](#)

Copyright © 2018 by the American Society for Pharmacology and Experimental Therapeutics ISSN 1521-009X (Online)

THANK YOU FOR ACCEPTING COOKIES

You can now hide this message or find out more about cookies.

Hide

More info