

Format: Abstract

Send to

Psychopharmacology (Berl). 2012 Sep;223(1):117-29. doi: 10.1007/s00213-012-2697-x. Epub 2012 Apr 28.

Cannabinol and cannabidiol exert opposing effects on rat feeding patterns.

Farrimond JA¹, Whalley BJ, Williams CM.

Author information

Abstract

RATIONALE: Increased food consumption following Δ(9)-tetrahydrocannabinol-induced cannabinoid type 1 receptor agonism is well documented. However, possible non-Δ(9)-tetrahydrocannabinol phytocannabinoid-induced feeding effects have yet to be fully investigated. Therefore, we have assessed the effects of the individual phytocannabinoids, cannabigerol, cannabidiol and cannabinol, upon feeding behaviors.

METHODS: Adult male rats were treated (p.o.) with cannabigerol, cannabidiol, cannabinol or cannabinol plus the CB(1)R antagonist, SR141716A. Prior to treatment, rats were satiated and food intake recorded following drug administration. Data were analyzed for hourly intake and meal microstructure.

RESULTS: Cannabinol induced a CB(1)R-mediated increase in appetitive behaviors via significant reductions in the latency to feed and increases in consummatory behaviors via increases in meal 1 size and duration. Cannabinol also significantly increased the intake during hour 1 and total chow consumed during the test. Conversely, cannabidiol significantly reduced total chow consumption over the test period. Cannabigerol administration induced no changes to feeding behavior.

CONCLUSION: This is the first time cannabinol has been shown to increase feeding. Therefore, cannabinol could, in the future, provide an alternative to the currently used and psychotropic Δ(9)-tetrahydrocannabinol-based medicines since cannabinol is currently considered to be non-psychotropic. Furthermore, cannabidiol reduced food intake in line with some existing reports, supporting the need for further mechanistic and behavioral work examining possible anti-obesity effects of cannabidiol.

PMID: 22543671 DOI: 10.1007/s00213-012-2697-x

[Indexed for MEDLINE]



Publication types, MeSH terms, Substances



LinkOut - more resources



Full text links



Save items

★ Add to Favorites

Similar articles

Cannabigerol is a novel, well-tolerated appe [Psychopharmacology (Berl). 2016]

Cannabidiol attenuates delta 9-tetrahydrocanna [Eur J Pharmacol. 1986]

Diuretic effects of cannabinoids. [J Pharmacol Exp Ther. 2013]

Review Molecular Pharmacology of Phytoc; [Prog Chem Org Nat Prod. 2017]

Review Pharmacokinetics and metabolism; [Handb Exp Pharmacol. 2005]

See reviews...

See all...

Cited by 2 PubMed Central articles

Explorative Placebo-Controlled Double-Blind [Cannabis Cannabinoid Res. 2017]

Cannabigerol is a novel, well-tolerated appe [Psychopharmacology (Berl). 2016]

Related information

Articles frequently viewed together

MedGen

PubChem Compound

PubChem Compound (MeSH Keyword)

PubChem Substance

Cited in PMC

Recent Activity

Turn Off Clear

Cannabinol and cannabidiol exert opposing effects on rat feedin PubMed

Cannabidiol Is a Potential Therapeutic for the Affective- PubMed

Cannabinoids in the management of difficult to treat pain. PubMed

Role of the cannabinoid system in pain control and therapeutic PubMed

Role[Title] AND cannabinoid[Title] AND system[Title] AND pain[PubMed

See more...

GETTING STARTED

- NCBI Education
- NCBI Help Manual
- NCBI Handbook
- Training & Tutorials
- Submit Data

RESOURCES

- Chemicals & Bioassays
- Data & Software
- DNA & RNA
- Domains & Structures
- Genes & Expression
- Genetics & Medicine
- Genomes & Maps
- Homology
- Literature
- Proteins
- Sequence Analysis
- Taxonomy
- Variation

POPULAR

- PubMed
- Bookshelf
- PubMed Central
- BLAST
- Nucleotide
- Genome
- SNP
- Gene
- Protein
- PubChem

FEATURED

- Genetic Testing Registry
- GenBank
- Reference Sequences
- Gene Expression Omnibus
- Genome Data Viewer
- Human Genome
- Mouse Genome
- Influenza Virus
- Primer-BLAST
- Sequence Read Archive

NCBI INFORMATION

- About NCBI
- Research at NCBI
- NCBI News & Blog
- NCBI FTP Site
- NCBI on Facebook
- NCBI on Twitter
- NCBI on YouTube
- Privacy Policy

