



**SOT FDA Colloquia on Emerging Toxicological Science:  
Challenges in Food and Ingredient Safety**

**May 8, 2024—Current State of the Science:  
Toxicology of Cannabidiol and Other Cannabinoids**

*Live Webcast*

## **Current State of the Science: Toxicology of Cannabidiol and Other Cannabinoids**

**May 8, 2024**

Co-Chairs: Luísa Camacho, PhD, US FDA NCTR, and Barbara Kaplan, PhD, Mississippi State University

### **Overview**

Cannabidiol (CBD) is a psychoactive, non-intoxicating cannabinoid found in marijuana and hemp. Following the passage of the 2018 Farm Bill, which legalized the production of hemp in the US, CBD has become widely available and used in a myriad of consumer products. CBD has been reported to treat insomnia, anxiety, pain, and inflammation and other immune diseases; however, thus far only a purified form of CBD is marketed in the US as an FDA-approved drug (Epidiolex), for the treatment of refractory epilepsies in children. Given the widespread use of CBD-containing products, it is critical to understand both its pharmacological and toxicological effects.

This colloquium will describe CBD in the context of marijuana, hemp, and other minor cannabinoids, summarize potential target organs/systems, and provide an overview of the pharmacokinetics and potential liver toxicity and drug-drug interactions of CBD. It will then focus on two areas of action or potential toxicity: the central nervous system and the reproductive system. The final presentation will review potential exposures and biological activities of other minor cannabinoids. The colloquium will conclude with a panel discussion on these and other active areas of CBD research.

### **Schedule** (all times Eastern US, UTC -4)

9:00 am–9:10 am

Welcome and Opening Remarks

Namandjé Bumpus, PhD, US FDA Principal Deputy Commissioner, Silver Spring, MD

9:10 am– 9:40 am

Cannabidiol Overview: Clinical Considerations, Regulatory Status, and Marketplace Concerns

Robert Welch, PharmD, University of Mississippi, Oxford, MS

9:40 am–10:10 am

Pharmacokinetics of Cannabidiol

Ryan Vandrey, PhD, Johns Hopkins University, Baltimore, MD

10:10 am–10:40 am

Central Nervous System Effects of Cannabidiol

Ethan Russo, MD, CReDO Science, Vashon, WA

10:40 am–11:00 am Break (20 min)

11:00 am–11:30 am

Effects of Cannabidiol on the Male Reproductive System

Renata Mazaro-Costa, PhD, Federal University of Goiás, Goiânia, Brazil

11:30 am–12:00 noon

Beyond CBD: Exposure, Chemistry, and Toxicity of “Minor” Cannabinoids

Michael Santillo, PhD, US FDA/CFSAN/OARSA, Laurel, MD

12:00 noon–12:45 pm

Roundtable Discussion

Moderator: Luísa Camacho and Barbara Kaplan

All speakers