



## **The Evolving Research Landscape of Low- and No-Calorie Sweeteners December 7, 2023**

**Co-chairs: Anne Macgregor-Das, PhD, US FDA CFSAN, and Daniele Wikoff, PhD, ToxStrategies LLC**

### **Session Overview**

Many different types of sweeteners used in the US are utilized broadly across food products. By law, these must be safe for consumption. Companies are responsible for ensuring the safety of ingredients and rely on standard approaches to substantiate safety. This involves utilization of standard toxicological experimental studies investigating the potential for adverse effects following acute and repeated-dose exposure, and to assess potential risk associated with use of the sweetener as intended by the ingredient use. More recently, the scientific community has begun to explore additional health outcomes and to assess novel aspects of exposure/outcome relationships via observational studies in human populations. This colloquium will survey modern aspects of low- and no-calorie sweetener research, including the emerging literature pertaining to sweeteners and their effects on the microbiome, and the potential impact of these changes on human health; and consideration of data types other than traditional toxicology testing in animals, including epidemiological and mechanistic data. The recent re-evaluation of aspartame will serve as a case study for how these emerging studies are being considered by risk assessors. Finally, the colloquium will conclude with a panel discussion on the key issues and knowledge gaps identified by the speakers and questions from participants.

Schedule (All times Eastern US, UTC -5)

9:00 am–9:10 am

Welcome from US FDA/SOT: Kristi Muldoon Jacobs, Acting Director US FDA CFSAN OFAS, Rockville, MD

9:10 am–9:50 am

An Introduction to Low- and No-Calorie Sweetener Uses in Foods and Beverages in the US  
Corey Scott, PhD, Cargill, Plymouth, MN

9:50 am–10:30 am

Low- and No-Calorie Sweeteners and Metabolic Health: A Review of the Evidence from Acute Metabolic and Endocrine Responses to Long Term Clinical Outcomes  
John Sievenpiper, MD, PhD, FRCPC, University of Toronto and St. Michael's Hospital,  
Toronto, Ontario, Canada

10:30 am–10:40 am Break

10:40 am–11:20 am  
Mechanistic and Epidemiological Studies and Their Role in the Safety Assessment of Low- and No-Calorie Sweeteners  
Daniele Wikoff, PhD, ToxStrategies LLC, Asheville, NC

11:20 am–12:00 pm  
Aspartame as a Case Study in Re-evaluation of Sweetener Safety by the Joint FAO/WHO Expert Committee on Food Additives  
Diane Benford, PhD, Chair 96th Joint FAO/WHO Expert Committee on Food Additives,  
Cheddington, Leighton Buzzard, United Kingdom

12:00 pm–1:00 pm  
Roundtable Discussion  
Moderator: Anne Macgregor-Das, PhD, US FDA CFSAN  
All speakers

*1:00 pm–2:00 pm*  
*Speaker Discussion with FDA Employees [limited to colloquia organizers and FDA employees only]*