

The International Cellulosics Association (ICA) welcomes research into cellulosic derivatives. We appreciate the insights in the article by Chassaing et al. 2022 in *Gastroenterology - Randomized Controlled-Feeding Study of Dietary Emulsifier Carboxymethylcellulose Reveals Detrimental Impacts on the Gut Microbiota and Metabolome*.

However, we also like to express reservations regarding certain methodological and interpretational aspects of the research. These concerns in particular:

Study Design and Statistical Concerns: There are several concerns regarding the study design and statistical analysis employed in the article. The small sample size, stratification and short duration of the study raise questions about the generalizability and statistical power of the findings. ICA acknowledges the significance of robust study designs and appropriate sample sizes to ensure reliable and meaningful results. A larger sample size would have provided a more comprehensive understanding of the effects of cellulosic derivatives on the parameters under investigation.

Measurement and Reporting Issues: We would also like to highlight measurement and reporting issues in the article. The absence of clear units or scales in figures and inconsistent reporting of statistical significance raises questions about the transparency and interpretability of the findings. Accurate and consistent reporting of measurements, units, and statistical significance is essential for proper scientific evaluation and replication of study results.

Dosage: The study employed a dose of 15 g of CMC per person per day, which likely surpasses the typical intake of CMC for the majority of individuals but may approximate the total consumption of emulsifiers in highly processed diets. However, it is important to note that the study seems to equate 15 g of CMC with 15 g of all emulsifiers, suggesting a generalization that all emulsifiers act in the same manner, which may oversimplify the complexity of various emulsifier effects. Furthermore, EFSA's combined exposure assessments for cellulose derivatives indicate that the highest estimated consumption of all cellulose derivatives by toddlers is 3 g/day, which is significantly lower than the dosage used in the study. Thus, Chassaing's study employs a dose level approximately five times greater than the vast majority of individuals would consume in a day, raising concerns about the relevance and applicability of the findings to real-world scenarios.

Confusion between Emulsifiers and Thickeners: There is a lack of clarity in distinguishing between emulsifiers and thickeners in the article. It is crucial to differentiate between these two categories of food additives, as they have different functionalities and potential effects on the human body.

Limitations in Drawing Causal Relationships: ICA would also like to question the authors' claims about causal relationships between the consumption of cellulose derivatives and detrimental health effects. It is important to recognize that an association does not necessarily imply causation. The authors' use of their own studies as the primary evidence without referencing external research raises concerns about potential biases and limitations in establishing a causal link.

The safety of cellulosic derivatives and the welfare of consumers is of utmost importance for ICA members. ICA supports and actively engages with regulatory bodies, such as the European Food Safety Authority (EFSA), to ensure that cellulosic derivatives undergo thorough safety assessments. ICA's commitment to safety extends to the promotion of Good Manufacturing Practices (GMP) and ongoing research and monitoring to address emerging safety concerns. By fostering collaboration between industry, academia, and regulatory bodies, ICA aims to uphold the highest safety standards and promote the safe and responsible use of cellulosic derivatives.

ICA encourages further research and robust scientific evaluation to enhance our understanding of the effects of cellulosic derivatives on human health. By promoting transparency, rigorous methodologies, and adherence to scientific principles, we can advance knowledge in this field and make informed decisions regarding the use of these ingredients.