

Investigating nanocellulose uptake and local effects following oral exposure: the NANOCELLUP project.

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The EFSA founded project NANOCELLUP-Use of New Approach Methodologies (NAMs) for the hazard assessment of nanofibers aims (i) to conduct a set of NAM-based studies for addressing the current data gaps on nanocellulose (NC) hazards and (ii) to offer a proposal for including the results in the regulatory hazard assessment of NC for consumers exposed via food. A battery of *in vitro* tests will provide insight into NC hazard and mode of action and will assess if any relationship between toxicity and physicochemical characteristics can be driven. Mono- and co-culture systems will be used and specific endpoints will be considered to investigate potential effects of NC. A tiered approach will be followed for investigation of the three main NC classes, which will focus on: 1. Digestion/degradation, including surface modifications, of NC by the human microbiome; 2. Assessment of the uptake and potential crossing of the intestinal barrier by NC; 3. Assessment of local effects, including inflammation and genotoxicity, of NC on the gastrointestinal epithelia.