



**Showcasing research from Professor Hongyan Xu's laboratory, College of Agricultural, Yanbian University, Yanji, China.**

Omics-based approaches for discovering active ingredients and regulating gut microbiota of *Actinidia arguta* exosome-like nanoparticles

This study aimed to explore the biological activities and functional mechanisms of *Actinidia arguta*-derived exosome-like nanoparticles (AAELNs). The isolation and identification of AAELNs, elucidated the role of AAELNs in mitigating oxidative damage. To address the complexity of the cargo carried by AAELNs, miRNA sequencing, lipidomics and proteomics analyses were conducted for characterization. The stability of AAELNs under various storage conditions were assessed, and their potential to reach the gut and modulate the colon microbiota were investigated. These findings suggest that AAELNs could serve as nanoshuttles in food, potentially offering health-enhancing properties.

**As featured in:**



See Hongyan Xu *et al.*, *Food Funct.*, 2024, 15, 5238.