

RSC Sustainability

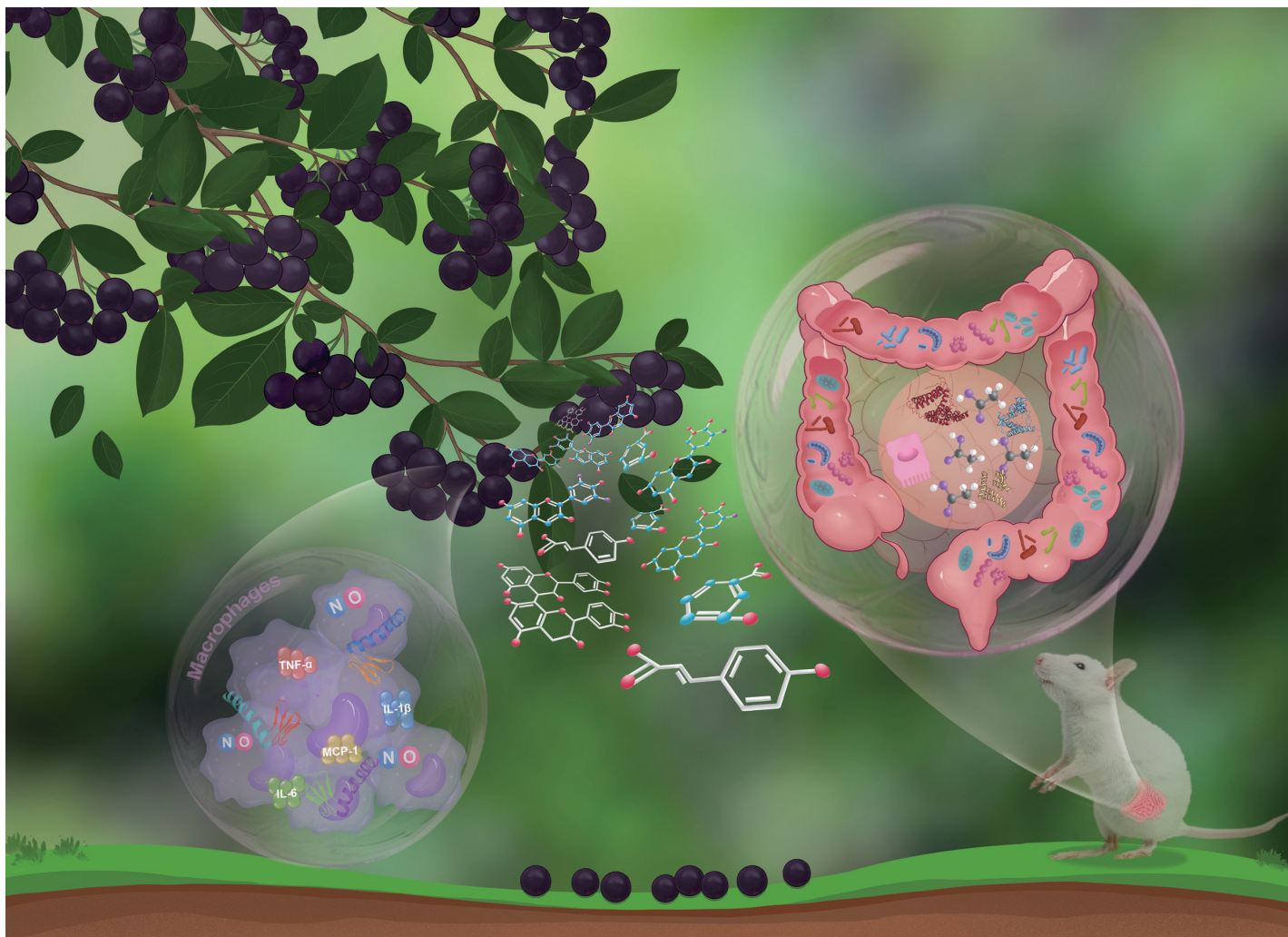
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Fundamental questions
Elemental answers



Showcasing research from Professor Aidong Sun's laboratory,
College of Biological Sciences and Technology, Beijing Forestry
University, Beijing, China.

Black chokeberry (*Aronia melanocarpa* L.) polyphenols attenuate
obesity-induced colonic inflammation by regulating gut microbiota
and the TLR4/NF- κ B signaling pathway in high fat diet-fed rats

In our investigation, black chokeberry polyphenols treatment (1)
suppressed NO release and pro-inflammatory cytokine levels, as
well as regulated oxidative stress of LPS-induced RAW264.7 cells
in a dose-dependent manner; (2) reduced body weight, improved
glucose tolerance and decreased serum pro-inflammatory
cytokine level in HFD-induced rats; (3) alleviated intestinal barrier
dysfunction and suppressed the colonic inflammation through
TLR4/NF- κ B signaling pathway; (4) altered the composition
and function of gut microbiota in HFD-induced rats. Our results
highlighted the potential of black chokeberry polyphenols
supplementation as a promising prebiotic strategy for treating
colonic inflammation.

As featured in:



See Ai-dong Sun *et al.*, *Food Funct.*,
2023, 14, 10014.