Gold may hold the secret to treating inflammatory bowel disease
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The team found that administering \( \text{Au}_{25} \) nanoclusters orally to mice suffering from colitis eliminated ROS, increased antioxidant enzymes, and inhibited pro-inflammatory cytokines, without any obvious side effects. According to one of the paper's authors, Fei Wang of China's The Seventh Affiliated Hospital of Sun Yat-Sen University, a reduction in the inflammation in the gastrointestinal tracts of the mice was observed within 24 hours. She adds: "And the fact that these nanoclusters can be administered orally, means there is no need for invasive procedures."

In addition, the team found that the nanoclusters have a number of benefits when compared with natural enzymes used in traditional IBD treatments, including lower cost, better stability, mass synthesis and easier storage. Wang explains: "The storage of \( \text{Au}_{25} \) nanoclusters was not affected by pH, temperature or solution medium, and their good physiological stability and acid resistance meant they were easily able to access the inflamed colon. They also have good biocompatibility and chemical stability and can remove a variety of ROS."

Wang concludes: "\( \text{Au}_{25} \) nanoclusters offer a promising strategy in the research field of nanomedicine therapy for IBD. We believe this study demonstrates their value as a scientific basis and experimental basis for the clinical treatment of IBD."


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