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Biodistribution, excretion, and toxicity of mesoporous silica nanoparticles after oral administration depend on their shape

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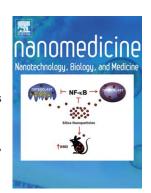
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**CCEPTED MANUS** 

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**Abstract** 

Mesoporous silica nanoparticles (MSNs) have been proven to be effective drug carriers for

oral delivery. However, little attention has been paid to their *in vivo* biodistribution and toxicity

after oral administration. The effect of particle shape on their *in vivo* behavior is also unknown.

In this study, we systematically studied the acute toxicity and biodistribution of three types of

MSNs with aspect ratios (ARs) of 1, 1.75 and 5 after oral administration. The effect of particle

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