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# Influences of size and surface coating of gold nanoparticles on inflammatory activation of macrophages

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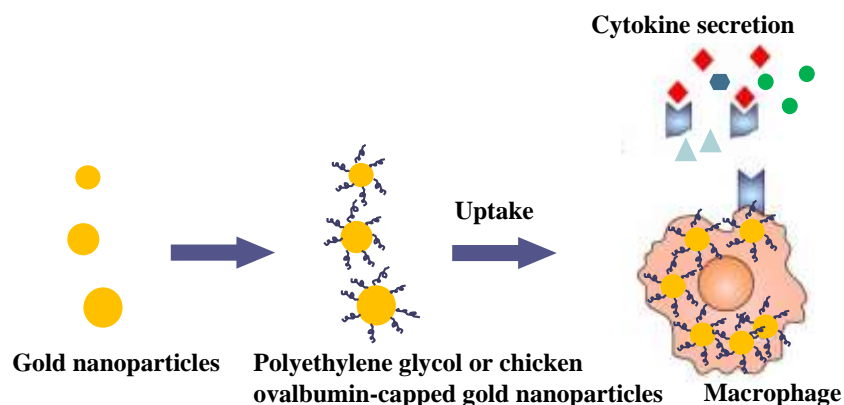
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## Graphical abstract

Secretion of various cytokines by macrophages depends on the size and surface coating of gold nanoparticles.



## Highlights

- GNPs with different sizes are coated with PEG (GNPs@PEG) or chicken ovalbumin (GNP@OVA).
- GNPs@PEG and GNP@OVA are internalized into macrophages, and located in cytoplasm but not in nucleus.
- GNP@OVA stimulate significantly strong secretion of TNF- $\alpha$ , IL-6 and IL-1 $\beta$  over GNPs@PEG.
- Small sized GNPs@PEG and GNP@OVA induce stronger inflammatory responses.

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