

Immune evasion particle for imaging & DDS

No production cytokines from murine dendritic cells, escape from phagocytosis by macrophage

Summary

Imaging drug for MRI / X-ray, hyperthermia, and DDS are proposed as application of nano particles. However, nano particles become the cause of inflammation and are trapped by macrophage. To solve these problems, this invention provides protein-coated and organic compound-modified nano particles having immune-response evasion function.

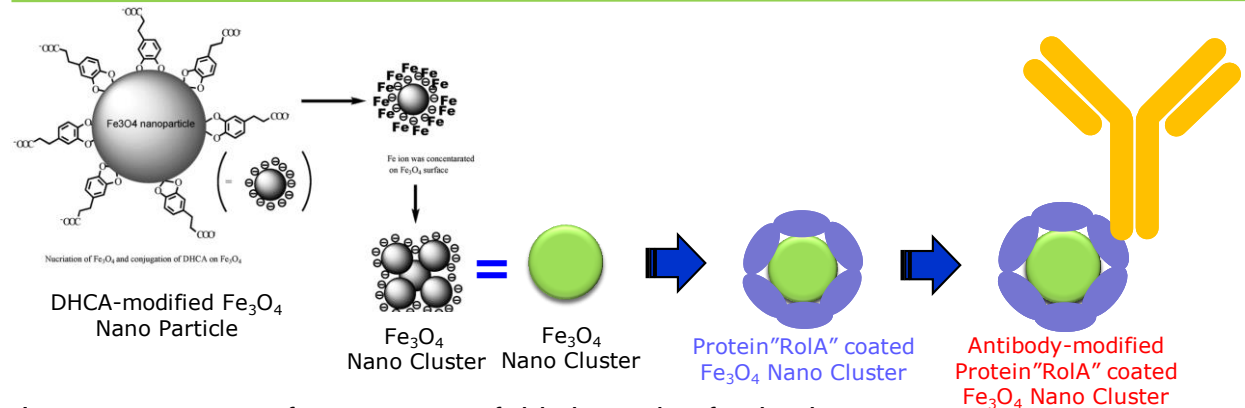
Effect & Application

The organic compound-modified Fe_3O_4 Nano Clusters (NCs) are synthesized (●). The cytokines were not produced from murine dendritic cells by co-incubation with the synthesized NCs. This indicates that the synthesized NCs had no immune stimulating property for murine dendritic cells and do not cause inflammatory reaction in our body. In addition, the synthesized NCs coated with RoIA, which is bio-surfactant, (●) can avoid phagocytosis by macrophages.

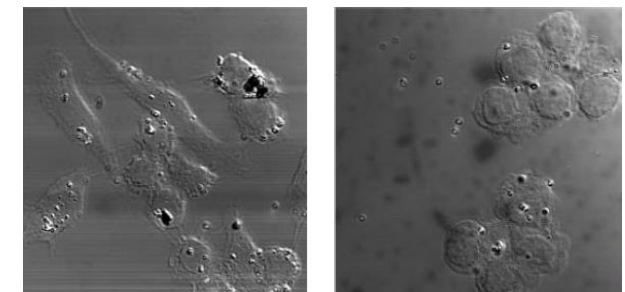
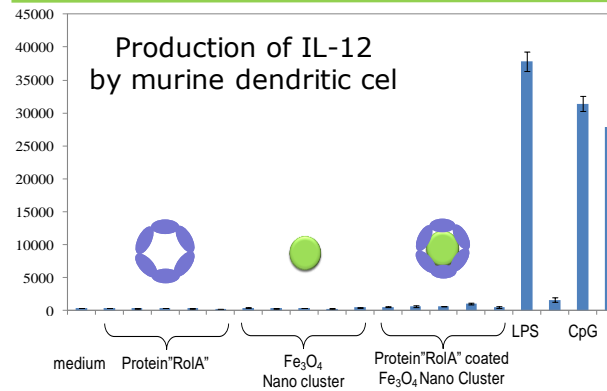
Patent Information

Patent App. No.: JP5669066, WO2013/024710
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Structure of this invention



Immune-response free property of this invention for *in vitro*



RoIA-coated Fe₃O₄ nano clusters can escape phagocytosis by macrophage (right), but Fe₃O₄ nano cluster without RoA can not do it (left).

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