

Multi-Compartmental Macrophage Delivery

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Description

Macrophages play an important role in regulating biological processes, mainly related to inflammatory and infectious diseases. These macrophages get converted from a rested state into an active state to tackle such disorders, wherein the activation is mediated by key activation sources such as cytokines (such as IFN- γ) and certain microbial products (such as lipopolysaccharides). **This novel approach enables the development and use of compositions for delivery of imaging or therapeutic agents to macrophages.**

Value Proposition

The composition:

- Is a multi-compartmental nanoparticulate delivery system (nanoparticles encapsulated within a microsphere) for safe and efficient delivery of agents
- Has an ability to overcome various intra and inter tissue barriers and to effectively deliver the agents at desired biological sites
- Has an ability to effectively compartmentalize various system components/delivery agents to improve the overall structural stability and to avoid any potential incompatibility issues
- Is capable of simultaneously delivering incompatible agents (such as hydrophilic and lipophilic agents)
- Allows for temporal control over the release of agents
- Would be effectively used for various commercial applications such as disease diagnosis, imaging, gene therapy, gene silencing, cancer treatments, and vaccination

Intellectual Property Status

Pending Utility Application 13/636,900

Pending European National Application 11760255.7

Pending Japan National Application

License Status

Available for license