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(54) **NANOPARTICLE DELIVERY VEHICLE**

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See application file for complete search history.

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(57) **ABSTRACT**

A nanoparticle delivery vehicle, comprising a nanoparticle, an active agent and a nuclear localization signal and methods of modulating gene expression and protein expression employing the nanoparticle delivery vehicle. A representative method includes providing a nanoparticle delivery vehicle comprising a nanoparticle having a diameter of about 30 nm or less, an active agent and a nuclear localization signal; and contacting a target cell with the nanoparticle delivery vehicle, whereby an active agent is delivered to the nucleus of a target cell. Another representative method includes providing a nanoparticle delivery vehicle comprising a nanoparticle having a diameter greater than or equal to about 30 nm, an active agent and a nuclear localization signal; and contacting a target cell with the nanoparticle delivery vehicle, whereby an active agent is delivered to the cytoplasm of a cell.

**26 Claims, 2 Drawing Sheets**