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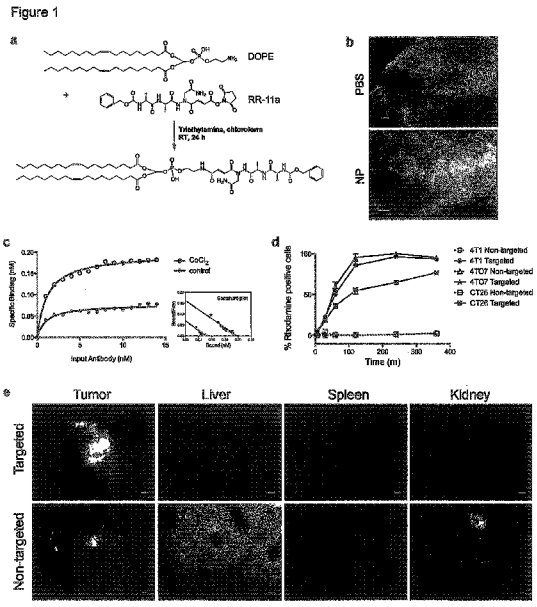
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(54) Title: NANOPARTICLE-BASED TUMOR-TARGETED DRUG DELIVERY

Figure 1



(57) Abstract: The present invention provides an aqueous tumor-targeting liposome nanoparticle composition comprising an aqueous dispersion of liposome nanoparticles. The nanoparticles preferably encapsulate an anti-cancer chemotherapeutic agent, which can be added to a preformed liposome composition or can be incorporated in the liposomes during the formation of the liposomes. The liposome nanoparticles comprise a legumain-targeting lipid admixed with one or more other micelle or vesicle-forming lipid materials in the form of nanoparticulate liposomes dispersed in an aqueous carrier. A preferred tumor-targeting liposome nanoparticle composition comprises (a) a legumain-targeting lipid component, (b) a zwitterionic lipid component; (c) an amino-substituted lipid component; (d) a neutral lipid component; and (e) polyethylene glycol-conjugated lipid component. The legumain-targeting lipid component comprising a hydrophobic lipid portion covalenetly attached to a legumain-binding moiety.

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