Process for synthesis of novel cationic amphiphiles containing N-Hydroxyalkyl group for intracellular delivery of biologically active molecules

Title of Product/Process/Design/Equipment	Process for synthesis of novel cationic amphiphiles containing N-Hydroxyalkyl group for intracellular delivery of biologically active molecules
IPR Status Patent/Copyright/Trademark Secured in India/Abroad IPR Details	Indian Patent 189751 (2003) US Patent 6,541,649 (2003).
Application/Uses	For delivering genes into cultured animal cells
Salient Technical Features including Competing Features	The procedures for making these novel cationic amphiphiles being simple, the prices of this new transfection reagent should be remarkably lower than that of LIPOFECTAMINE™ and LIPOFECTIN™ The transfection efficiency of the novel cationic amphiphiles are much better than that of LIPOFECTIN™ and comparable to or better than the transfection efficiencies of LIPOFECTAMINE.™ The cationic amphiphiles disclosed in the present invention have been tested positive for transfecting COS 1, Hela, Vero, CV 1 and NIH3T3 cells and the primary cell line, Rat Skin Fibroblasts.
Level/Scale of Development	Bench scale
Environmental Considerations	Non-hazardous
Status of Commercialization	Not commercialized yet
Major Raw Materials to be Utilized	Chemicals
Major Plant Equipment and Machinery Required	Organic Chemistry laboratory and animal cell culture facility
Techno-Economics	viable
Technology Package	Synthetic process for preparing the cationic amphiphiles and process for delivering drugs/genes into cultured animal cells

For further information please contact

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