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alkylamino of 1 to about 6 carbon atoms, or dialkylamino of 2 to about 12 carbon atoms.

6. A lipid according to claim 5 herein  $R_2$  is an amino acid residue selected from the group consisting of lysine, arginine, histidine, ornithine, and an amino acid analog.

7. A lipid according to claim 6 wherein the amino acid analog is selected from the group consisting of 3-carboxyspermidine, 5-carboxyspermidine, 6-carboxyspermine and monoalkyl, dialkyl or peralkyl substituted derivatives which are substituted on one or more amine nitrogens with an alkyl group of 1 to about 6 carbon atoms.

8. A lipid according to claim 1 wherein  $R_3$  and  $R_4$  are independently a lipophilic moiety of 1 to about 24 carbon atoms, a positively charged moiety, or a negatively charged moiety.

9. A lipid according to claim 8 wherein the lipophilic moiety is selected from the group consisting of a straight chain alkyl moiety of 1 to about 24 carbon atoms, a straight chain alkenyl moiety of 2 to about 24 carbon atoms, a symmetrical branched alkyl or alkenyl moiety of about 10 to about 50 carbon atoms, an unsymmetrical branched alkyl or alkenyl moiety of about 10 to about 50 carbon atoms, aryl moiety of about 5 to about 20 carbon atoms, an aralkyl moiety of about 6 to about 25 carbon atoms, and a steroidal moiety.

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10. A lipid according to claim 8 wherein positively charged moiety is selected from the group consisting of amino acid residues having a positively charged group on the side chain, an alkylaminoalkyl moiety, a fluoroalkylaminoalkyl moiety, a perfluoroalkylaminoalkyl moiety, a guanidiniumalkyl moiety, an enaminoalkyl moiety, a cyclic aminoalkyl moiety, an amidinoalkyl moiety, an isothioureia alkyl moiety, and a heterocyclic amine moiety.

11. A lipid according to claim 8 wherein the negatively charged moiety is selected from the group consisting of a carboxyalkyl moiety, a phosphonoalkyl moiety, a sulfonoalkyl moiety, and a phosphatidylalkyl moiety of 1 to about 24 carbon atoms.

12. A lipid according to claim 1 wherein the sum of n and p is from 1 to 8.

13. A lipid according to claim 1 wherein the sum of n and p is from 1 to 4.

14. A lipid according to claim 1 wherein the sum of n and p is from 1 to 2.

15. A lipid according to claim 1 wherein  $X^-$  is a pharmaceutically acceptable anion or polyanion.

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